Cambridge and Peterborough JPSF

Horningsea Greenway

Full Business Case



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1 Introduction

1.1.1 The Horningsea Greenway scheme will offer improved active mode connectivity in the north-east Cambridge area. The Greenway will include upgrades to shared-use paths between Horningsea and Fen Ditton, a high-quality parallel crossing at the junction of B1047 as well as safety improvements at the Fen Ditton Church junction. The scheme will include traffic calming measures including raised tables and 20mph speed limits.

1.1.2 The Horningsea Greenway is one of the twelve sustainable travel corridor schemes proposed as part of the Greenways project by Greater Cambridge Partnership (GCP). A Programme Outline Case (POC) for the Greenways Project was prepared in January 2022.

1.1.3 The Horningsea Greenway scheme Outline Business Case (OBC) was submitted in January 2023 and approved to progress to FBC by the GCP Executive Board in March 2023.

1.1.4 This document presents the FBC for the Horningsea Greenway which reflects the scheme at detailed design stage. The scheme is currently under construction.

2 Strategic Case

2.1 Approach

2.1.1 The Strategic Case for the Horningsea Greenway project forms the first of the five cases for the Full Business Case (FBC). The purpose of the Strategic Case is to set out the strategic and policy context for the Horningsea Greenway, to demonstrate the need for the project and provide an assessment of the project's ability to address transport and wider policy requirements.

2.1.2 The Strategic Case has been structured to align with the Department for Transport's (DfT) Transport business case guidance for the strategic dimension.

2.2 Business Strategy

2.2.1 The Greater Cambridge City Deal was signed between Government and local representatives in 2014. The GCP is the local delivery body, responsible for overseeing the delivery of the City Deal and the promotion of local economic growth and development. The GCP aims to:

- Deliver up to £1 billion of investment, providing vital improvements to infrastructure, supporting and accelerating the creation of 44,000 new jobs and 33,500 new homes to Greater Cambridge by 2031: and
- Enable a new wave of innovation-led growth in the Greater Cambridge area by investing in infrastructure, housing, and skills, thereby addressing housing shortages and transport congestion bottlenecks that will facilitate its continued growth and a continuation of the 'Cambridge Phenomenon'.

2.2.2 To ensure infrastructure investment aligns with the above aims, the Greater Cambridge City Deal Assurance Framework has established key strategic objectives against which projects will be prioritised. The objectives aim to create and retain high-tech businesses of the future, target investments to the needs of the Greater Cambridge economy, improve connectivity between clusters and labour markets, and attract and retain skilled people by investing in transport and housing.

2.2.3 The Horningsea Greenway effectively meets multiple strategic objectives of the City Deal as it offers a green active travel corridor that enables safe and easy travel to workplaces, local schools, colleges, and shops. The scheme is in line with GCP's objective of delivering fast, reliable, and affordable ways of travelling between employment and housing hubs as it provides improved links to Cambridge from Horningsea, Fen Ditton and onwards on other active mode infrastructure to Midsummer Common. Lastly, the scheme reduces community severance by improving transport links across the B1047 and provides safe active travel connections between the places where people live, work and shop, thus encouraging more walking and cycling trips.

2.3 Scheme Background

2.3.1 In 2016, the Greater Cambridge Greenways project began with a review of the existing cycling and walking routes into Cambridge. GCP then consulted local communities to understand how the Greenways could best meet their needs and mitigate concerns. Formal consultations were then carried out on each route, before reports were issued for approval at Executive Board meetings during 2020.

2.3.2 Horningsea Greenway is one the twelve Greenways which aim to make cycle journeys easier, cheaper, healthier, greener, and more pleasant into and out of Cambridge as well as promoting the enjoyment of the countryside for leisure purposes. Additionally, the scheme also contributes to making local journeys, such as school and nursery runs safer and easier.

2.3.3 Horningsea is located approximately 10km north of Cambridge. Cyclists are currently served by shared use paths adjacent to the B1047.

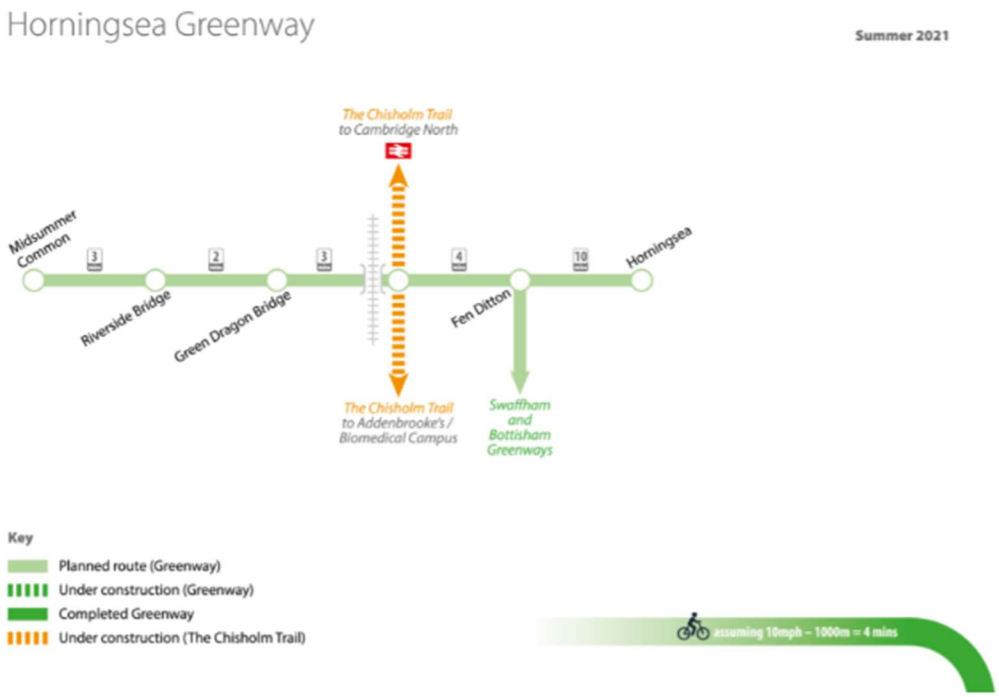
2.3.4 Figure 2-1 shows the Horningsea Greenway route which provides improvements to walking and cycling facilities between Horningsea, Fen Ditton, and north Cambridge. The route also provides a link to the Chisholm Trail which in turn links to both Cambridge North station and the Biomedical Campus, as well as the Swaffham and Bottisham Greenways. To the south of Fen Ditton the Horningsea Greenway route includes the existing Wadloes Path and the proposed Bow-tie arrangement connecting with the Bottisham greenway. A neighbouring off-road arrangement provides connectivity to an active travel corridor that continues westwards to the city centre via the Green Dragon bridge to Riverside bridge and its link to Chesterton. It is important to note that the route will utilise the existing Wadloes Path, which provides cycling connectivity; however, improvements to Wadloes Path are not included within the Horningsea Greenway scheme.IT should be noted that Wadloes Path was previously widened as part of a 'quick win' scheme.

2.3.5 In 2016, the Greenways project began with a review of the existing cycling and walking routes into Cambridge. GCP then consulted local communities to understand how the Greenways could best meet their needs and mitigate concerns. Formal consultations were then carried out on each route, before reports were issued for approval at Executive Board meetings throughout 2020.

2.3.6 The Horningsea Greenway has undergone several consultations with stakeholders since 2016. The latest public engagement for the Horningsea Greenway was undertaken in winter 2022.

2.3.7 The Horningsea Greenway scheme was approved by the GCP Executive Board on 1 October 2020. The OBC was approved by the GCP Executive Board on 9th March 2023, which also agreed the programme for delivery including the development of the FBC. Since the development of the OBC, Wadloes Path has been descoped from the scheme following consultation. The scheme detailed design has been undertaken and approved. The scheme construction is currently underway, with a target completion and scheme opening by the end of 2024.

Figure 2-1 - Horningsea Greenway



Source: Summer 2021, GCP

2.4 Policy Context

2.4.1 This section provides the policy context within which the development of the Horningsea Greenway has been considered. It demonstrates that the delivery of the cycle scheme aligns with the strategic objectives of policies set at local, regional, and national scales.

2.4.2 The alignment of the Horningsea Greenway with national policy is shown in Table 2-1. Further detail on national policy for the Greenways programme is set out in the Greenways POC.

Table 2-1 – National Policy Summary

Policy	Key Strategic Objectives	Horningsea Greenway Scheme alignment
National Policy		
Net Zero Strategy: Build Back Greener (2021)	▪ Decarbonising all sectors of the UK economy to meet net zero target by 2050. ▪ Maintaining consumer choice ▪ Protecting the most vulnerable through Government support	Provision of cycling and walking network encourages active travel, reducing reliance on the car and reduced greenhouse gas emissions.

Policy	Key Strategic Objectives	Horningsea Greenway Scheme alignment
National Policy		
	▪ Government working with businesses to continue delivering deep cost reductions in low carbon tech	Delivery of the Horningsea Greenway will contribute towards the Net Zero Strategy's goal of making active travel a natural first choice for all who can take them by providing safer cycling and walking infrastructure between Horningsea and Cambridge.
The Environment Act (2021)	▪ Protection of the natural environment from the effects of human activity ▪ Protection of people from the effects of human activity on the natural environment ▪ Maintenance, restoration, or enhancement of the natural environment ▪ Monitoring, assessing, considering, advising, or reporting on environmental protection ▪ Provides a legal framework for environmental governance in the UK	The Horningsea Greenway aligns with the goals of the Environment Act, as biodiversity net gain is a key influence along with the general duty to conserve and enhance biodiversity in Cambridge.
Ten Point Plan for a Green Industrial Revolution (2020)	UK to be the world's number one centre for green technology, laying the foundations for economic growth, delivering Net Zero emissions. ▪ Advancing offshore wind ▪ Driving the Growth of Low Carbon Hydrogen ▪ New & advanced nuclear power ▪ Accelerating shift to zero emission vehicles ▪ Green public transport, cycling and walking ▪ Jet zero and green ships ▪ Greener buildings ▪ Investment in carbon capture, usage and storage	Delivery of the Horningsea Greenway will directly contribute to the strategic goals of The Ten Point Plan by providing better air quality through delivering a sustainable active travel cycling route, and in doing so protect our natural environment. Provision of a cycle network will further encourage active travel, reducing reliance on the car and greenhouse gas emissions.

Policy	Key Strategic Objectives	Horningsea Greenway Scheme alignment
National Policy		
	▪ Protecting our natural environment ▪ Green finance and innovation	
Gear Change (2020)	▪ Better and safer streets for cycling and people ▪ Cycling and walking at the heart of decision making ▪ Empowering and encouraging local authorities ▪ Enabling people to cycle and protecting them when they do ▪ Healthier, happier and greener communities ▪ Convenient and accessible travel	Delivery of the Horningsea Greenway closely aligns to the vision of Gear Change, creating a safer and more attractive cycling environment in and around Cambridge. Through enabling residents and cycle user groups to use the cycle network as a form of active travel, the strategic goals of Gear Change shall be met.
The Second Cycling and Walking Investment Strategy (CWIS2) LTN 1/20 (2022)	▪ Reaffirmation of cycling and walking to be the natural choice for short journeys, and to increase cycling and walking levels. ▪ CWIS2 outlines the total investment into active travel across government through to 2025. ▪ Redesigning on towns, cities and neighbourhoods to enable more active short journeys where possible.	The Horningsea Greenway will align with the CWIS by providing infrastructure in line with design outlined in the LTN 1/20. Being developed in liaison with local communities and cycling user groups, the route is designed to be inclusive of different stakeholder groups as outlined in both the CWIS and LTN 1/20. Delivery of the Horningsea Greenway will provide communities access to a well-connected cycle network for both commuting and recreational purposes.
National Planning Policy Framework (updated 2023)	▪ Economic objective: to contribute to the development of a strong, responsive, and competitive economy by ensuring that sufficient land of the right sorts is available in the right places and at the right time to enable growth, innovation, and better productivity; and by identifying and coordinating infrastructure provision. ▪ Social objective: to promote strong, vibrant, and healthy communities by ensuring that a sufficient number and variety	The Horningsea Greenway will help to further the sustainable development goals of the NPPF and align with its key principles by: ▪ Improving the health of communities by promoting the use of sustainable modes of transport by the provision of an active travel network ▪ Encouraging the use of non-car modes to minimise air quality effects of car travel

Policy	Key Strategic Objectives	Horningsea Greenway Scheme alignment
National Policy		
	of homes are available to meet the needs of current and future generations; and to promote well-designed, beautiful, and safe places with accessible services and open spaces that reflect current and future needs and support communities' health, social, and cultural well-being. ■ Social objective: to maintain and improve our natural, built, and historic environments, including making better use of land, increasing biodiversity, conserving natural resources, reducing waste and pollution, and mitigating and adapting to climate change, including transitioning to a low-carbon economy.	■ Creating a well-designed, beautiful and safe environment for pedestrians and cyclists ■ Providing Natural Capital benefits and ecosystem services delivered through green infrastructure strategies, which combined offer an effective use of land.
Transport Investment Strategy (2017)	■ To create a more reliable, less congested, and better-connected transport network ■ To support the creation of new housing ■ To build a stronger, more balanced economy by enhancing productivity and responding to local growth priorities ■ To enhance our global competitiveness by making Britain a more attractive place to trade and invest	Delivery of the Horningsea Greenway will help to achieve the objectives of the TIS by providing an alternative way of travelling to the car, minimising the potential for increased congestion. Provision of alternate attractive travel option will enable the network to better cope with increased demand from planned housing and population growth.

2.4.4 The alignment of the Horningsea Greenway with regional policy is shown in Table 2-2. Further detail on regional policy for the Greenways programme is set out in the Greenways POC.

Table 2-2 – Regional Policy Summary

Policy	Key Strategic Objectives	Horningsea Greenway Scheme alignment
Cambridgeshire and Peterborough Independent Commission on Climate (2021)	▪ Better air quality and access to nature, to improve health and wellbeing. ▪ Development of an ambitious funding plan ▪ Construction of a local area energy strategy, identifying heat zones and building retrofit priorities, and integrated with transportation plans that encourage electric vehicles and zero-carbon vehicles ▪ Development of a plan for engagement and behaviour change with local people and businesses, which should cover the need for action and provide information on options and the choices that have to be made at local level	Delivery of the Horningsea Greenway will contribute to the Commission's recommendations for active travel which includes making cycling more accessible. Reducing the number of journeys made by car will reduce levels of greenhouse gas emissions and improve local air quality. An uptake of active travel will contribute to better health and wellbeing.
England's Economic Heartland Transport Strategy (2020)	▪ Improve local and rural connectivity to support a green recovery from COVID-19 and sustainable growth, whilst reaching Net Zero by 2050. ▪ Harnessing the region's expertise in clean technologies to deliver a greener transport system. ▪ Use of investment in East West Rail and mass transit systems as a catalyst to revolutionise public transportation throughout the Midwest. ▪ Encourage the use of digital technologies to improve transportation. ▪ Help the goods industry while lowering its environmental impact.	Delivery of the Horningsea Greenway will directly contribute to the expansion of this strategic aim to 'improve local and rural connectivity.' The Horningsea Greenway along with the other Greenway schemes will together provide a network of radial routes from the centre of Cambridge, providing surrounding communities with access to the centre. Doing so through active travel will reduce greenhouse gas emissions.

Policy	Key Strategic Objectives	Horningsea Greenway Scheme alignment
The Cambridgeshire and Peterborough Local Transport Plan (2020)	▪ Aims to connect all new and existing communities sustainably and provide an integrated rural public transport network. ▪ Supporting economic growth and distributing prosperity. ▪ Integrating spatial planning and reducing the need to travel. ▪ Providing attractive alternatives to driving (modal shift). ▪ Preparing for the future of mobility. ▪ Greening our transport infrastructure. ▪ Supporting social mobility and access to opportunity for all. ▪ Protecting and increasing biodiversity.	Delivery of the Horningsea Greenway will further these strategic goals by providing a sustainable and active travel network in Cambridgeshire and Peterborough. Communities will be safer and better connected, whilst air quality levels will be improved. The delivery of Horningsea Greenway will be key to ensuring a positive uptake of technologies such as affordable e-bikes and cargo bikes, and for new bike sharing schemes that are supported by the policy.
Local Transport and Connectivity Plan (Draft, 2022)	Thie LTCP aims to address four transportation challenges highlighted by the impact of the pandemic: ▪ Connectivity and accessibility ▪ Making systems work ▪ Affordability and flexibility ▪ Environmental impact Aims include providing improvement in the six key areas of productivity, connectivity, climate, environment, health and safety. Key updates: ▪ Need for improved cycling and walking links. ▪ A need to reduce car usage. ▪ More frequent transport services. ▪ A need for better rural transport services. ▪ Suggestions for new train stations and lines. ▪ Suggestions for new bus routes in specific locations.	The Horningsea Greenway scheme contributes towards delivering elements of an integrated transport system recognised in the LTCP, such as providing connected, safe and attractive walking and cycling infrastructure. The delivery of Horningsea Greenway scheme will encourage mode shift to sustainable modes of transport by providing active travel infrastructure.

2.4.5 This section addresses local policies and the alignment of the Horningsea Greenway with these polices.

Cambridge Local Plan (2018)

2.4.6 The Cambridge Local Plan covers the period 2018-2031 and identifies the need for 14,000 additional homes and 22,000 jobs. It identifies a series of 'Areas of Major Change' (AOMC), through which a number of the Greenways will run. The Horningsea Greenway will provide connections for local residents and provide an opportunity for an active commute to existing and new businesses and employees in the area.

South Cambridgeshire Local Plan (2018)

2.4.7 Chapter 10 of the Local Plan addresses transport, outlining the aim to 'promote and deliver sustainable transport and infrastructure.' The LP highlights the need for transport provision to be balanced in favour of sustainable modes, to give people a choice as to how they travel.

2.4.8 The Horningsea Greenway will contribute directly to this strategic aim, providing a sustainable and active travel choice for local communities and commuters alike. By investing in the cycle network, both first and last mile journeys may be made by an active mode, thereby integrating into the wider transport network.

First Proposals: Emerging Greater Cambridge Local Plan (2021)

2.4.9 The Greater Cambridge Local Plan aims to effectively plan and allocate sites over both Cambridge and South Cambridgeshire. The plan aims to make Greater Cambridge a place where a large decrease in climate impacts correlates with a large increase in quality of life for all communities. It outlines that new development must reduce carbon emissions and reliance on the private car and contribute towards creating thriving neighbourhoods.

2.4.10 Delivery of the Horningsea Greenway furthers the aims of the emerging Greater Cambridge Local Plan as active travel is proven to improve quality of life through better health and access to greenspace. It will also contribute to a reduction in greenhouse gas emissions through reducing the demand on the road network and thereby levels of car use.

Active Travel Strategy for Cambridgeshire Consultation (2023)

2.4.11 The Active Travel Strategy for Cambridgeshire builds on achievements in encouraging active travel to date which is reflected in the high levels of cycling in the city of Cambridge, and aims to further improve and increase the proportion of journeys made by active modes across Cambridgeshire. The Active Travel Strategy will enable and encourage more people to switch some of the journeys they once made by private car to active modes, making the use of active modes, travellers preferred mode of travel.

2.4.12 Following consultation completed in November 2022, a programme of schemes for future funding bids and delivery will be finalised, aligning with the Local Cycling and Walking Infrastructure Plan.

2.4.13 The Active Travel Strategy will provide a comprehensive set of policies that will enable quality provision of active travel infrastructure and initiatives in Cambridgeshire to contribute to the County Council's target to achieve Net Zero Carbon by 2045.

Greenways Environmental Design Strategy (2023)

2.4.14 The Greenways Environmental Design Strategy uses numerous frameworks to map out precise and accurate designs to satisfy the targets and objectives of Cambridgeshire's Greenways, including Horningsea Greenway.

2.4.15 The Greenways Character Framework is used to identify landscape sensitivities and distinctiveness across the Greenways. The Framework explains how different Greenways can be tailored to their specific needs by mapping and describing "Identity Types and Areas" through different combinations of elements and key features that distinguish landscapes from one another; judgements about future landscape change can be made based on knowledge of what is distinctive and provides its landscape sensitivity value. As a result, once implemented, the Horningsea Greenway project may be made adaptable and landscape changes addressed in the design to meet the needs of communities.

2.4.16 Included in the Design Strategy is the Greenways Green and Blue Infrastructure Strategy (GBI), which takes into account Greenway schemes most challenging issues, GCP's objectives and principles of good design, a comprehensive understanding of the context and the coalescence of parallel work streams, and targeted enhancements for offsetting and mitigating impacts to deliver the Greenways.

2.4.17 The Greenways Design Code is used to help influence development ideas to provide maximum clarity regarding design requirements at an early stage and to represent local character and preferences. The Greenways Design Code provides a framework for developing healthy, greener, environmentally responsive, sustainable, and differentiated active travel routes that adhere to a consistent and high-quality design standard; this coincides with the Horningsea Greenway's goals and objectives of providing a cleaner and greener method to move between destinations. The Greenways Design Code is intended to establish clear expectations for design quality, beauty, and sustainability, as well as detailed design elements for the physical development of the Greenways, maintaining that policy objectives are properly considered and represented within the scheme.

Summary of Policy Context

2.4.18 Delivery of the Horningsea Greenway contributes to key strategic policies through delivering an active and sustainable mode of travel via a green infrastructure network which will encourage modal shift away from car use. In doing so, the scheme will deliver multiple environmental, social, and economic benefits, and contribute to the reduction in greenhouse gas emissions required to meet Net Zero targets by 2050.

2.5 Strategic Problems and Issues

2.5.1 This section sets out the socio-economic context, the current situation and outlines the strategic need for the scheme.

Economic Context

Employment and Skills

2.5.2 Cambridge is a key economic centre for research, innovation, and technology, and is strategically important for attracting international investors into the UK. This relies heavily on Cambridgeshire continuing to offer strong links between businesses, training campuses and housing developments.

2.5.3 Tackling congestion was identified in the City Deal as a key barrier to growth. GCP aims to reduce traffic by up to 15% on 2011 levels, equivalent to taking one in four cars off the road compared to today's traffic flows. Commuters into Cambridge by car spend on average a quarter of their journey time stuck in traffic, with significant implications for their productivity and wellbeing. Absence of attractive sustainable travel options linking housing, education and employment further adds to reliance on car use.

2.5.4 Specifically, a number of rural settlements near the A14/B1047 (Horningsea Road) have been 'missed out' by several key transport projects, leaving local residents disconnected from main stations, business parks, and key employment sites[1]. Without action, by 2031 car trips into the city are set to increase by up to 70%, with already lengthy journey times expected to double along these links.[2] The proposed Horningsea Greenway provides an alternative active travel commuter link from the north-eastern settlements at Horningsea and Fen Ditton to Cambridge City Centre.

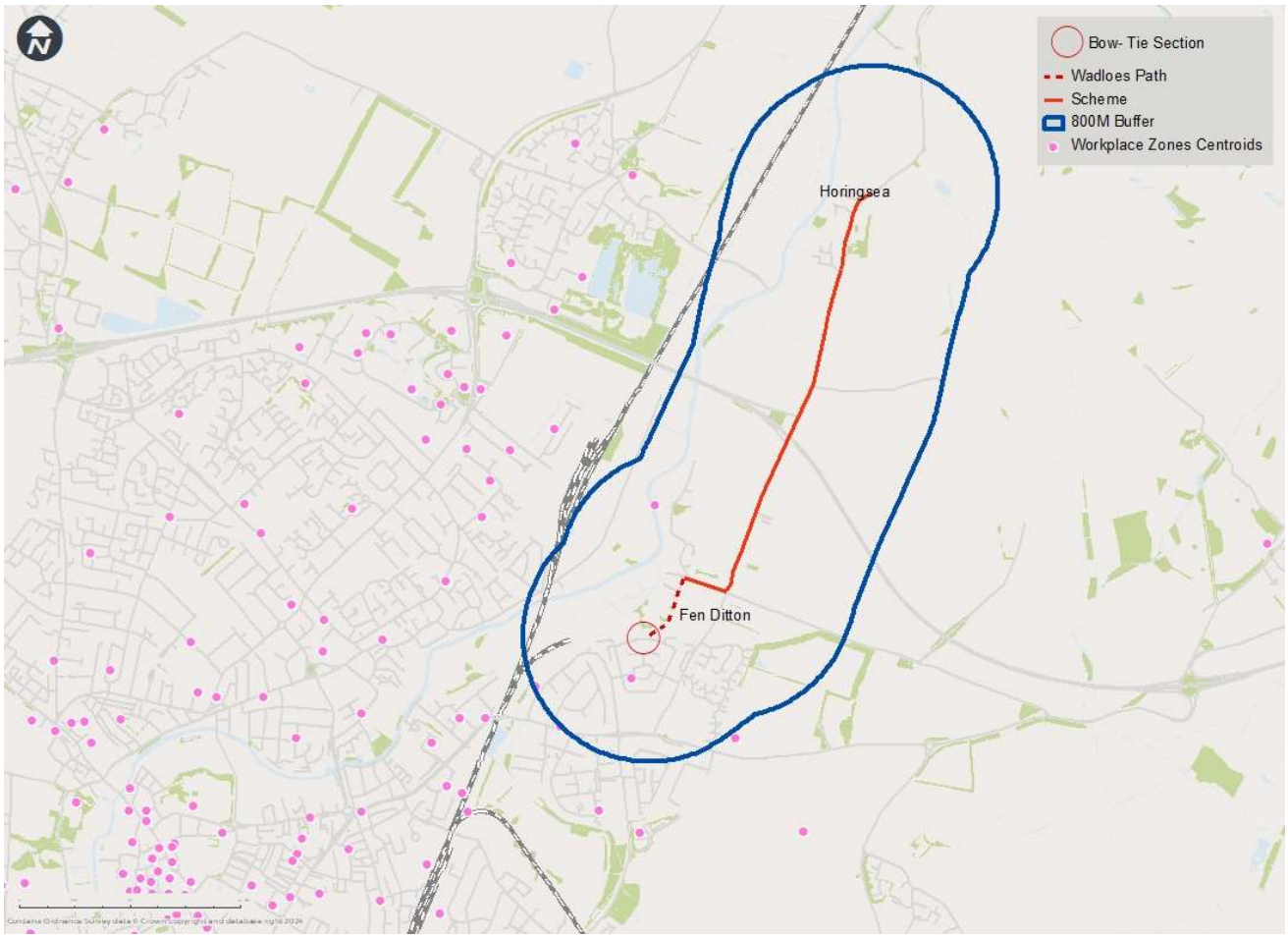
2.5.5 10% of East Cambridgeshire residents (including residents in the Horningsea Greenway corridor), commute to work in Cambridge by walking and cycling, compared to the national average of 14%. 84% of the working population in East Cambridgeshire use the car for access to employment. This is significantly higher than the national average at 73%, which adds considerably to the cost of transport and limits employment accessibility[3]. Lack of equitable access to the transport system by the absence of affordable and alternative active travel options curtails job accessibility as well as limiting the potential labour market for employers.

2.5.6 Economic growth in the Greater Cambridge region will correlate with a greater number of trips made, and therefore a greater demand on the road network if nothing changes. Without new sustainable transport interventions peak hour journey times are forecast to increase by as much as 90%.[4] This traffic congestion will cause delays resulting in a fall in productivity.

2.5.7 As indicated in Figure 2-2, the workplace zone centroids are concentrated in the west and southwest of the scheme corridor in the city centre. To the north of Cambridge, the workplace zone centroids are located further apart at Chesterton, Fen Ditton, and Horningsea. In the absence of a safe, continuous, and attractive active travel option, commuters working in workplaces in central Cambridge are reliant on cars for commuting trips further adding to traffic flows along not only strategic corridors, but also local routes. Increased traffic on local village roads creates an unsafe and unpleasant environment for active travel, hence further discouraging uptake of cycling or walking.

[1] Document.ashx (cmis.uk.com)
[2] Cambourne to Cambridge (greatercambridge.org.uk)
[3] Cambridge to Peterborough Travel to Work Summary, 2021
[4] Greater Cambridge Greenways Programme Outline Case, January 2022 (Draft)

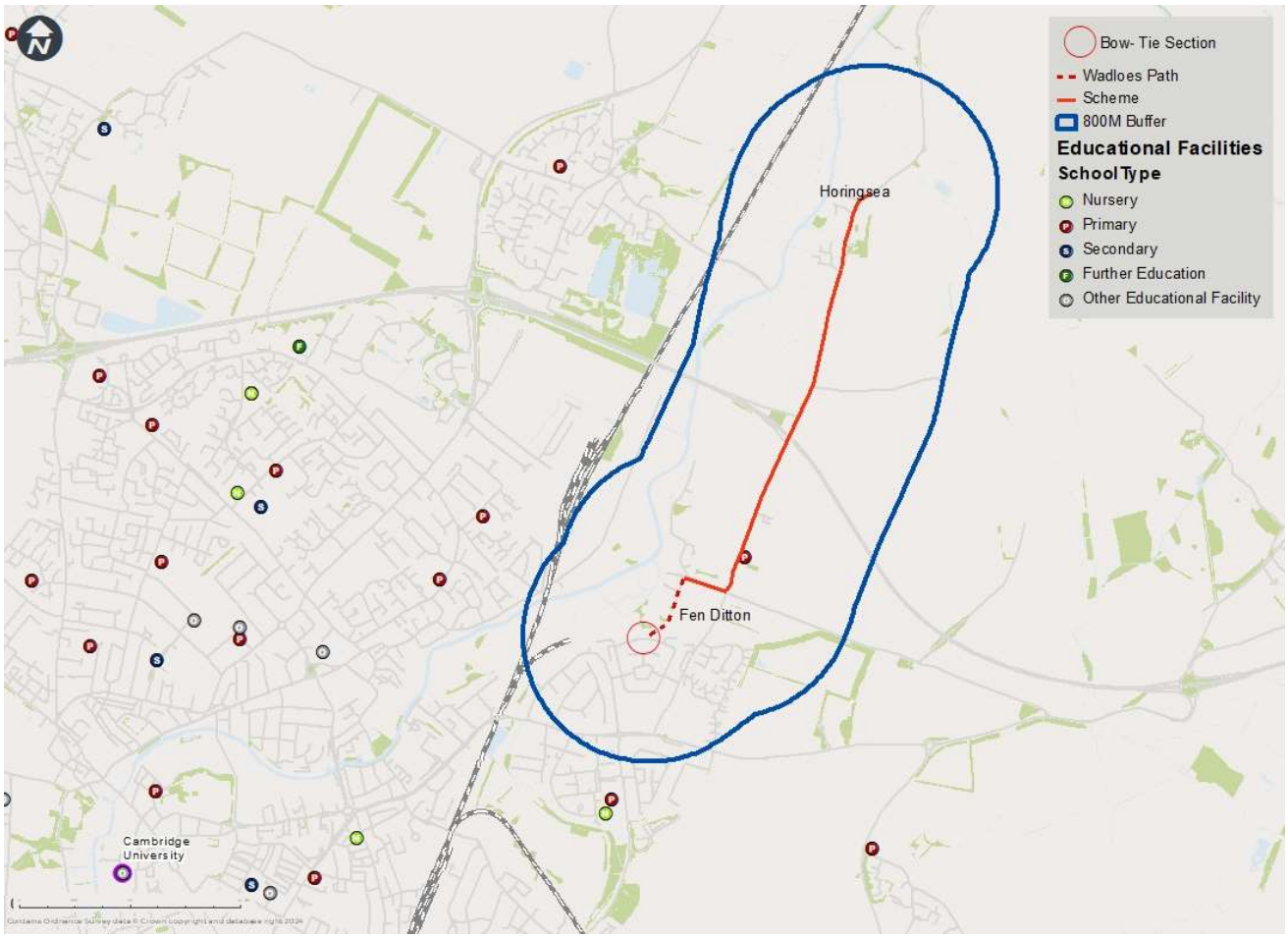
Figure 2-2 - Workplace Zone Centroids



2.5.8 The Draft LTCP identified through stakeholder engagement that poor transport services and transport connectivity is a major challenge and constraint for students, adult learners, and employees to access opportunities. The cost of transport that inhibits many lower-income groups to access learning or employment opportunities and exacerbates rural disparities has also been raised. It is noted that transport in the towns and rural communities is a particular challenge for accessing learning or employment opportunities.

2.5.9 Figure 2-3 presents the educational centres near the scheme area including the Fen Ditton Community Primary School and the Galfrid Primary School in the northeast of Cambridge. However, there is a lack of continuous high quality active travel infrastructure connecting these education centres with villages and parishes in the area. Students will be able to cycle to Fen Ditton Primary School in less than ten minutes from Horningsea using the new, safer greenway route. This will encourage active travel trips for shorter journeys to educational centres, improving the health and wellbeing of local students.

Figure 2-3 - Educational Facilities in the Horningsea Scheme Corridor



Spatial Development

2.5.10 The 'city fringe' growth in Cambridge has been shown to yield at least 41% active travel mode share and only 33% travel by car.[5] This indicates that there is existing demand and potential new demand for active travel infrastructure from fringe markets such as Fen Ditton and Horningsea.

2.5.11 As per the HELAA Published Sites November 2021 and HELAA Site Updates (Amended Land Use or Development Amount) July 2022 sites, an additional 2,162 residential units are proposed to the east and west of Horningsea Road to support future housing demand[6].

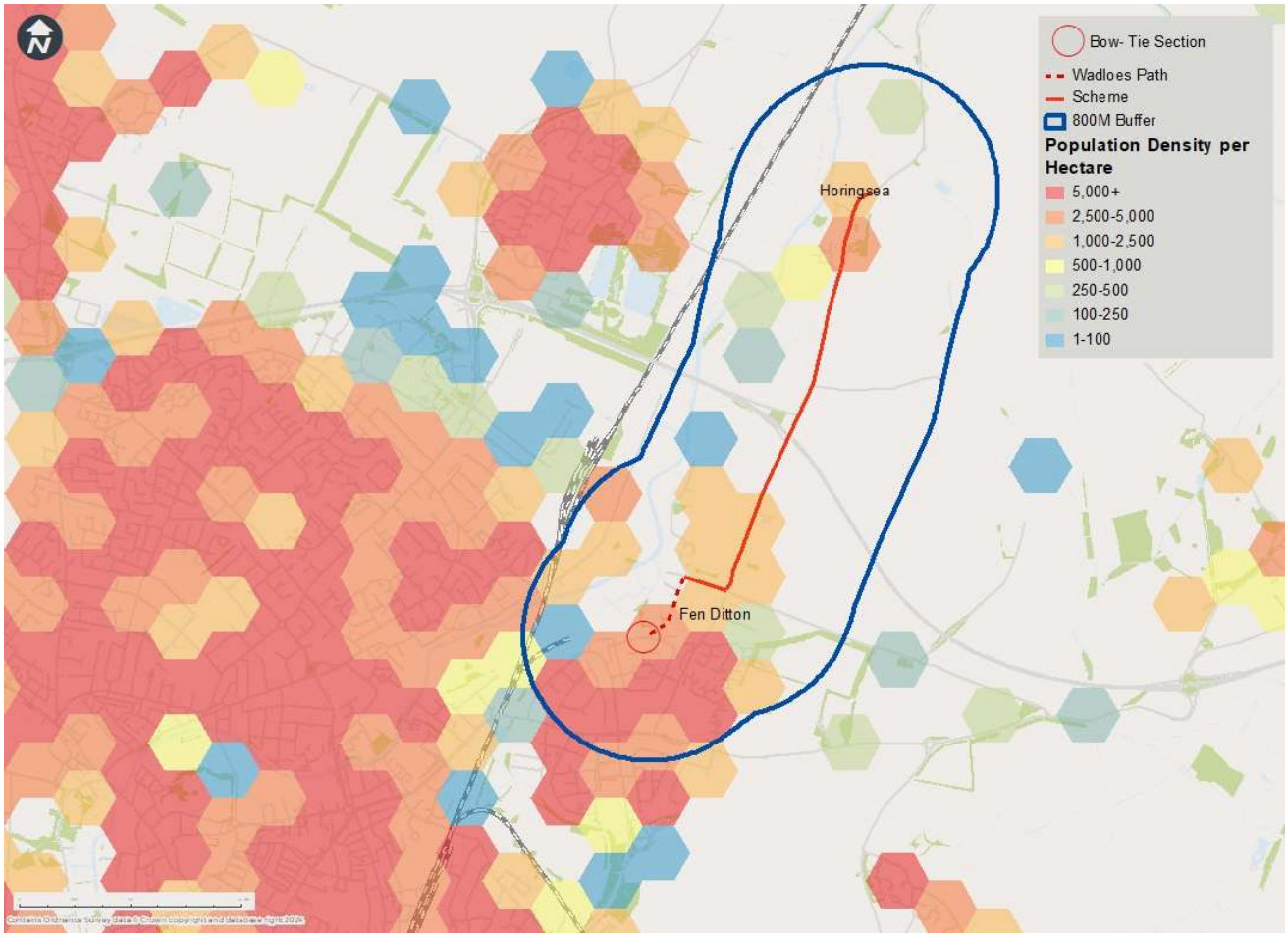
Population Growth

2.5.12 The population of Cambridge is expected to grow in the coming years, and the transport network is required to accommodate that growth. In East Cambridgeshire, the population size has increased by 4.6% from around 84,200 in 2011 to 88,100 in 2021. This figure is lower than the overall increase for England which was 6.6%.

[5] Draft LTCP. Draft-LTCP.pdf (yourltcp.co.uk)
[6] Site submissions (greatercambridgeplanning.org)

2.5.13 Horningsea and Fen Ditton are located within the Cambridge greenbelt. Further south-east of the greenbelt lies Stow-cum-Quy where commercial and residential development sites are proposed. The Horningsea Greenway would enable a sustainable travel link from these settlements to Cambridge which is a major employment centre for East Cambridgeshire urban fringe Figure 2-4 shows the resident population per hex-cell, with each hex-cell representing an area of 5 hectares to enable consistent comparison across the study area.

Figure 2-4 - Resident Population (Census 2021 estimate)



Social Context

Community Characteristics

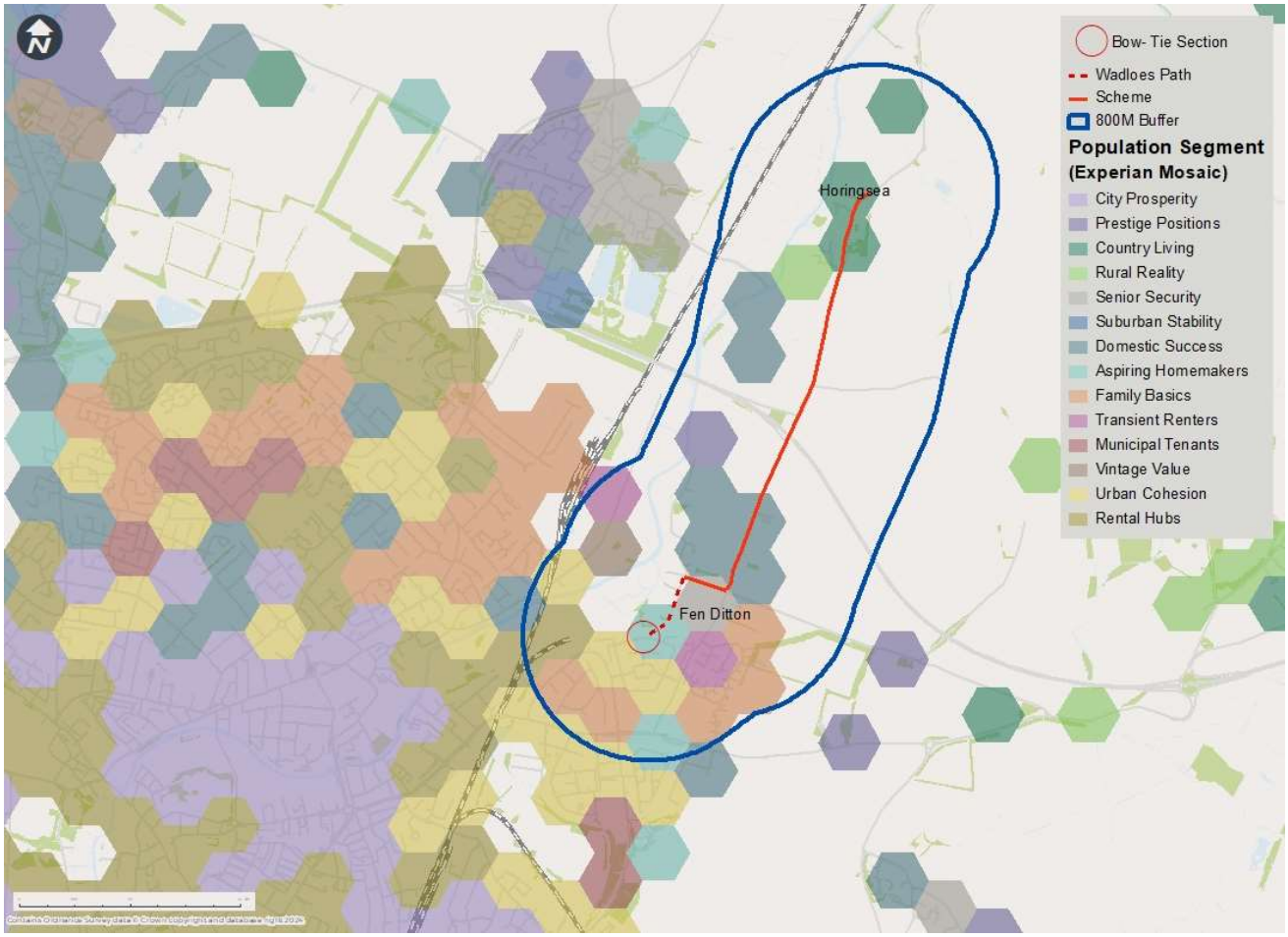
2.5.14 Figure 2-5 shows the consumer classification system which segments the population into 15 groups based on their consumer behaviour.

2.5.15 The mosaic presents clusters of ‘Prestige Positions’, ‘Country Living’, ‘Rural Reality’, ‘Domestic Success’ and ‘Aspiring Homemakers’ population segments in the scheme area near Horningsea and Fen Ditton. Closer to Cambridge concentrations of ‘City Prosperity’ and ‘Urban Cohesion’ population are identified, with clusters of ‘Country Living’ in Milton Fen and Horningsea. ‘Country Living’ populations are well-off homeowners who live in the countryside often beyond easy commuting reach of major towns and cities.

2.5.16 Both ‘Prestige Positions’ and ‘Domestic Success’ populations have low propensity for using public transport or shared modes and rely majorly on cars. However, families in Domestic Success are headed by couples typically aged in their late 30-40s, with many having school age children. While these populations have affinity to use sustainable travel for school trips, lack of safe active mode travel connection to schools could deter mode shift and increase reliance on cars for shorter trips as well.

2.5.17 ‘Rural Reality’ and ‘Aspiring Homemakers’ consist of low income and middle-income households respectively and have a preference for using affordable modes of transport services. ‘Aspiring Homemakers’ particularly require access to school. Limited affordable alternative transport options create challenges such as inequitable access to education and employment for these population segments. There are clusters of ‘Transient Renters’ near Fen Ditton, who are mainly single people who pay modest rents for low-cost homes.

Figure 2-5 - Mosaic Groups



Ageing Population

2.5.18 In East Cambridgeshire there has been an increase of 27.2% in people aged 65 years and over and a 37% increase in the population of people over the age of 90 in the last decade. As shown in Figure 2-6, the proportion of over 70-year-olds in the scheme area based on Census 2021 data. It is

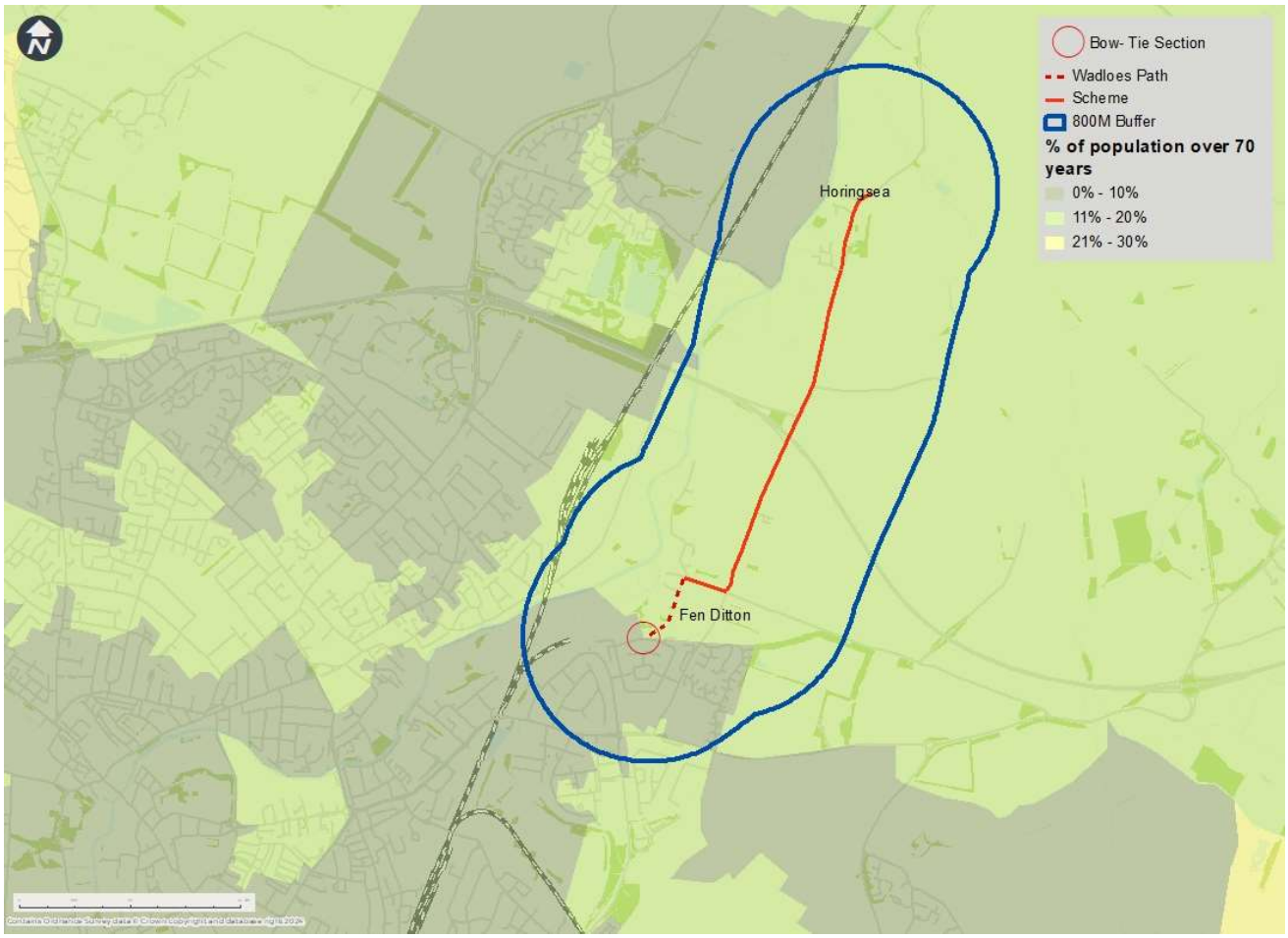
observed that the majority of the scheme area consist of 11-20% of the population being over 70 years of age.

2.5.19 In a report prepared by the Centre for Ageing Better and Sustrans[7], it is noted that levels of physical activity and of active travel drop off rapidly with age. Considering physical activity levels make people healthier and help to lead to longer and more independent lives, it is deemed essential that older people should be targeted to address the decline. Given that over 65-year-olds represent 20.7% of the population in East Cambridgeshire, the lack of active travel infrastructure and options to enjoy the outdoors adversely impacts overall community health and wellbeing. Active travel improvements and opportunities are factors that contribute to encouraging active travel and result in physical and mental wellbeing in people within the 65 year and over age group.

2.5.20 Barriers to cycling are more pronounced for some user groups. In terms of age, the percentage of the population that cycles at least once a week drops from 46% of people aged 56-65 to 24% of people aged 66+. Recognising that East Cambridgeshire has seen an increase of 27.2% in elderly population in the region, the negative correlation between cycling and age is a major challenge. Improvements to cycling infrastructure including surface improvement, lighting, and safer crossings all of which contribute to road safety and personal safety are considered necessary to encourage uptake of cycling, specifically the elderly.

[7] Best foot forward: Exploring the barriers and enablers to active travel among 50-70 year olds | Centre for Ageing Better (ageing-better.org.uk)

Figure 2-6 - Percentage of Population over 70 years

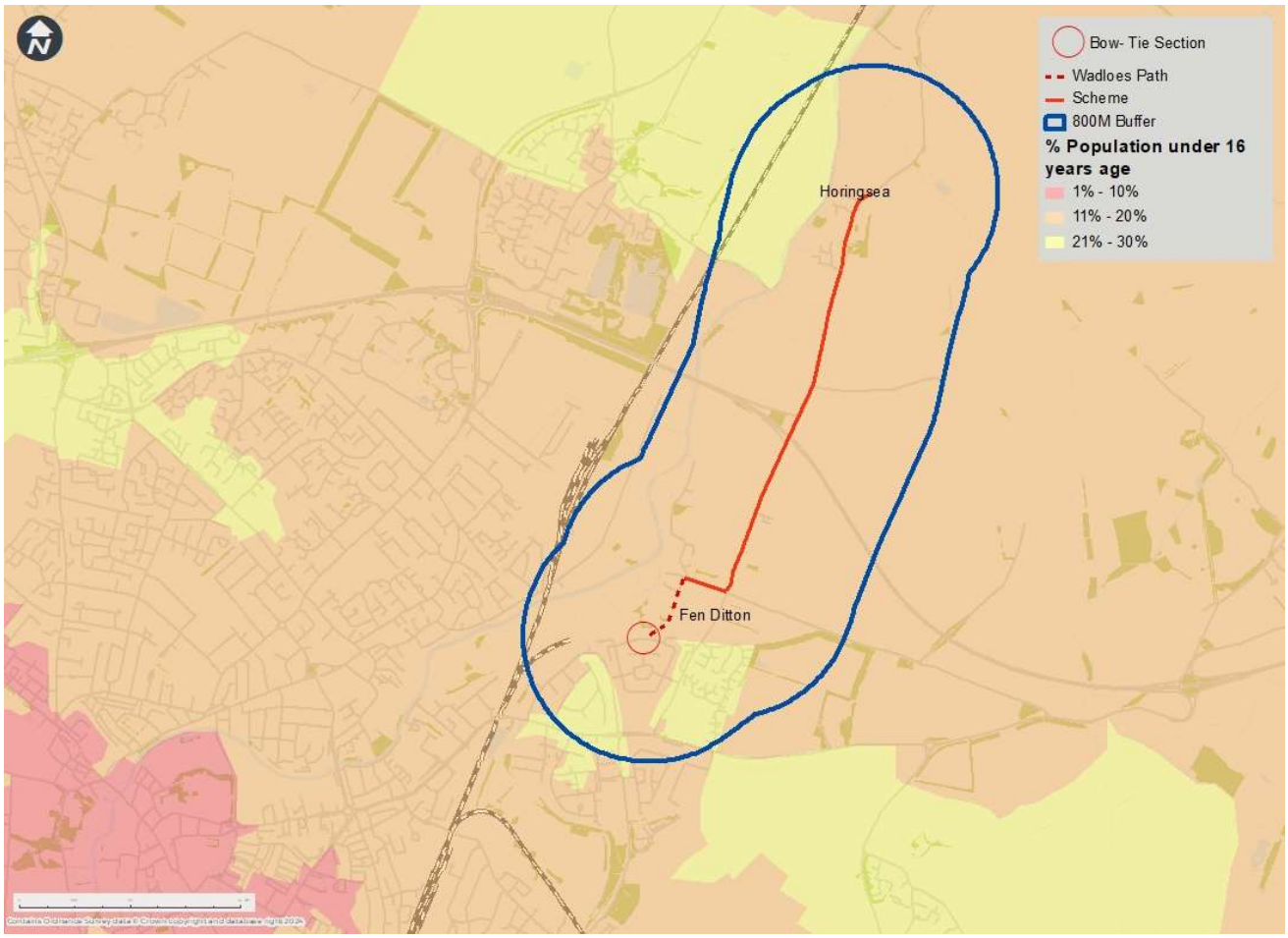


Access to Education

2.5.21 Figure 2-7 presents the proportion of children in the north-eastern Cambridge area. As can be observed the proportion of children in the Horningsea and Fen Ditton area is 11-20% of the total population. There is one school near the centre of Fen Ditton, and several more towards the north of Cambridge. Lack of safe sustainable travel links connecting across the A14 and B1047 makes walking or cycling school trips potentially unsafe and creates barriers to access to educational opportunities beyond the scheme area. Furthermore, in the absence of a continuous safe active travel corridor connecting to schools, school trips from settlements within 2km from the primary school at Fen Ditton are encouraged to rely on cars instead of active travel.

2.5.22 In addition to providing more direct cycling routes for school children, there is a need for cycling infrastructure to be of high-quality and continuous with safe crossing opportunities.

Figure 2-7 - Percentage of children under 16 years



Transport Context

Road Network

2.5.23 The areas which the Horningsea Greenway connects can currently be accessed by vehicles from Cambridge using the A14 (Junction 34) and B1047. The B1047 connects Cambridge with Fen Ditton and Horningsea via the A603 and the A1134. The A14 is particularly busy at Fen Ditton. Although there is an existing cycleway adjacent to the River Cam, there is no verge separating it from the A14 carriageway and the route is not continuous within Fen Ditton.

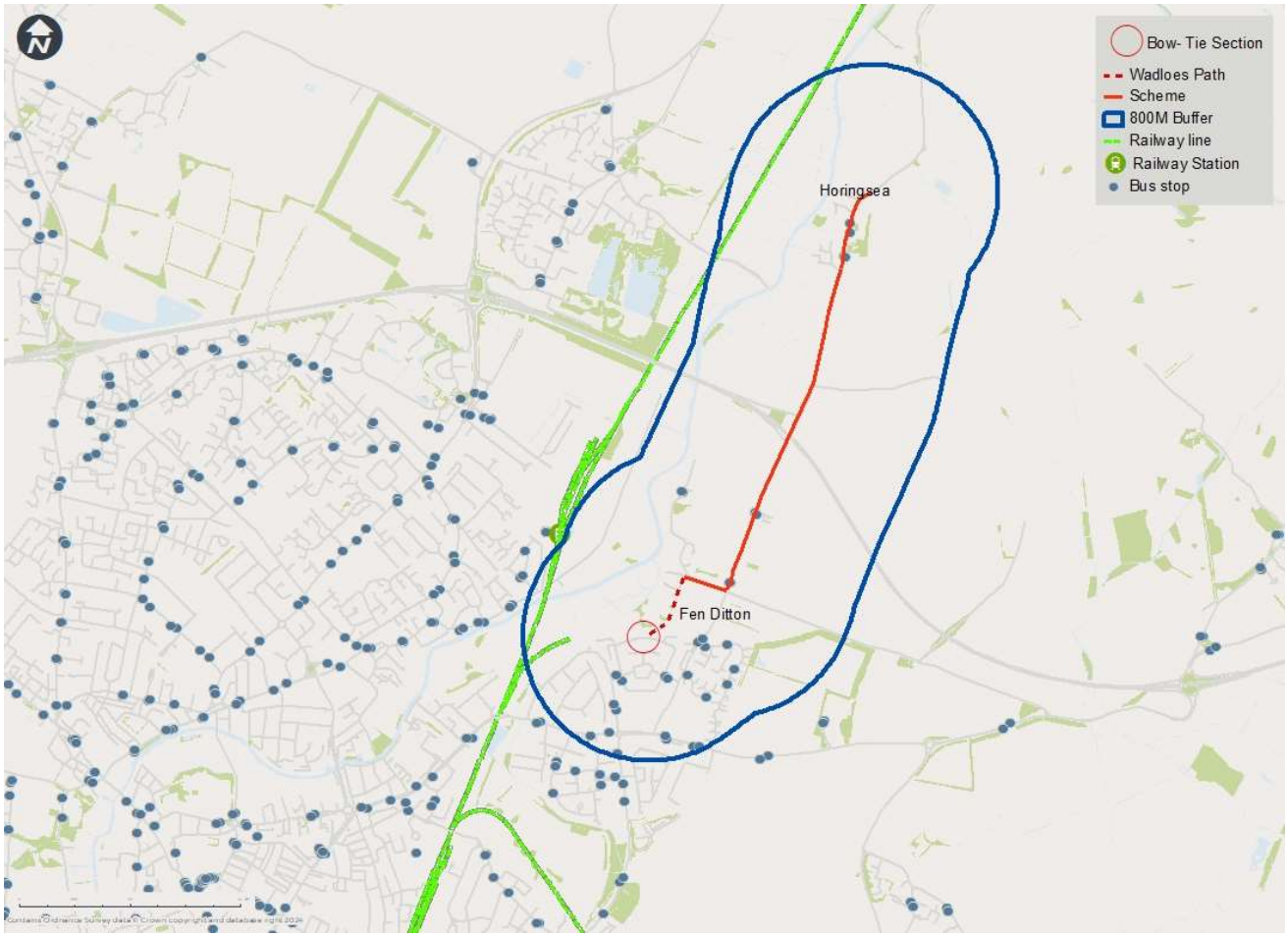
2.5.24 The East Cambridgeshire Transport Strategy emphasises the need for capacity improvements to the A14 to support considerable population and housing growth. The later has led to a significant trend in traffic growth. This trend is supported by the 2019 Traffic Monitoring Report[8] (Cambridgeshire County Council, CCC), which reported an 8% increase in the number of motor vehicles entering and leaving Cambridge per 12-hour day compared to 2009 with associated increased congestion and journey time delay.

[8] https://www.cambridgeshire.gov.uk/asset-library/Traffic-Monitoring-Report-2019.pdf

Bus Network

2.5.25 Horningsea and Fen Ditton are connected by bus service number 19 which has a frequency of 2 buses an hour. Travelling from Horningsea to Cambridge City Centre by bus involves a lengthy journey and multiple changes. The journey involves a change from bus service number 19 to number 9 at Caravan Park and then proceeds along the A1309 to Cambridge City Centre, taking approximately 48 minutes. Intermodal connections are shown in Figure 2-8.

Figure 2-8 - Intermodal Connections



Cycle Network

2.5.26 Horningsea is located approximately 7km northeast of Cambridge across relatively flat terrain. Cyclists are currently served by a shared use path adjacent to Horningsea Road which is of varying quality and width. Horningsea Greenway will follow 3.45 kilometres of existing road or path, with no new path to be created as part of the scheme.

2.5.27 Currently, the scheme corridor consists of predominantly off-road national cycle routes connecting Horningsea to northeast Cambridge, with a short on-road section at the High Street near Fen Ditton which links to the existing Wadloes Path through Ditton Meadows.

Figure 2-9 - Existing Cycle Trips in the Horningsea Corridor

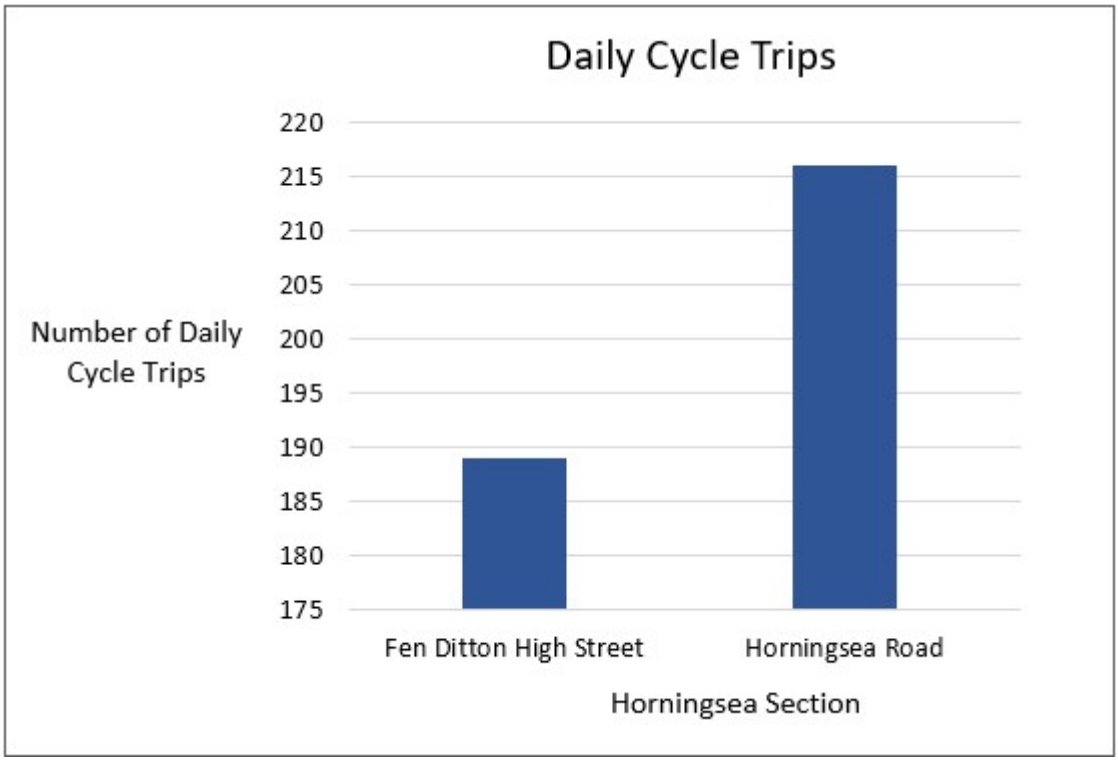
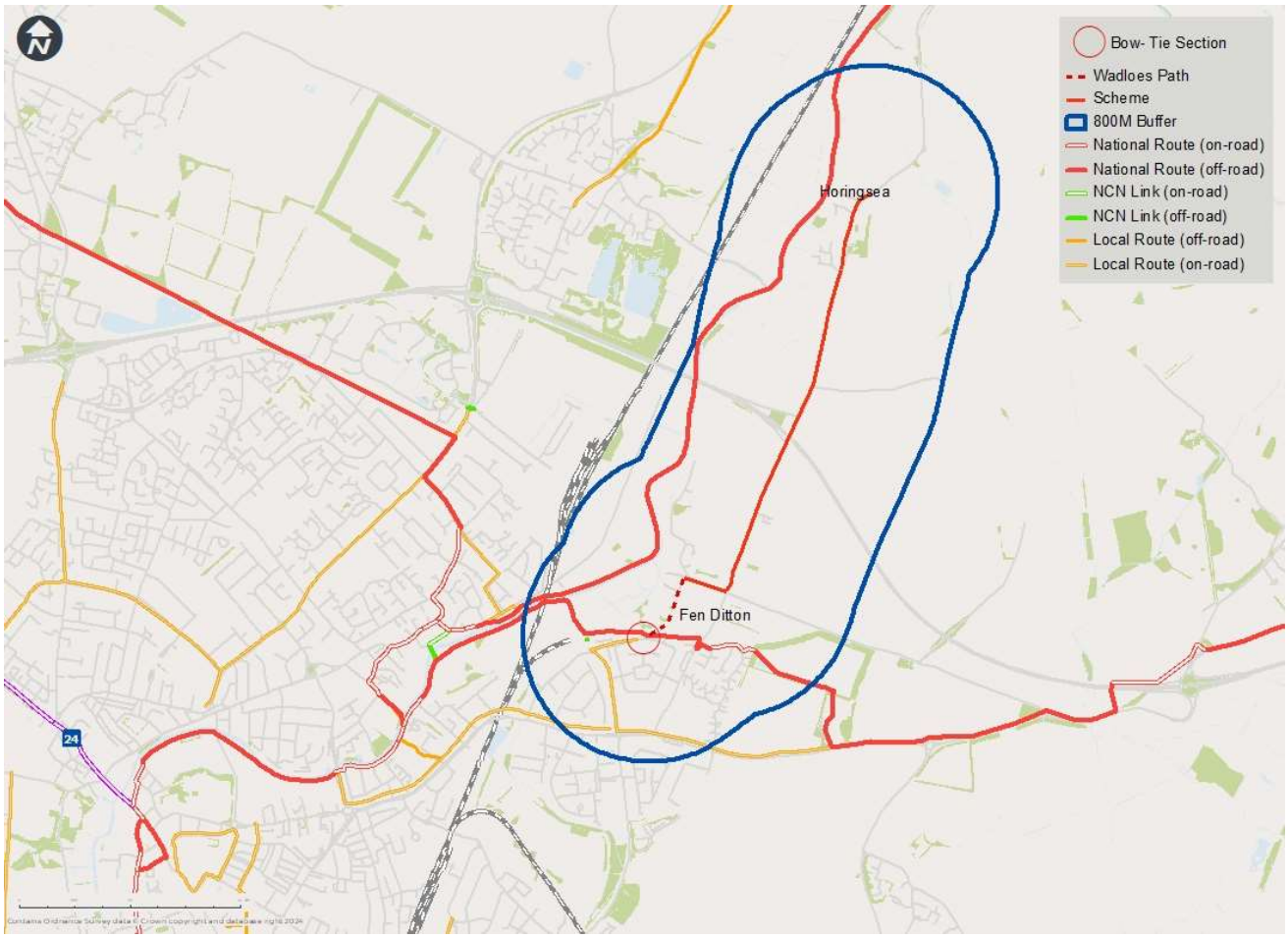


Figure 2-10 - Existing Cycle Network



2.5.28 The scheme connects to other city cycle schemes such as the Chisholm Trail, providing a link to Cambridge Station and Cambridge North station. The Horningsea Greenway provides an opportunity to connect residents at Horningsea and Fen Ditton to further national cycle routes, as well as the regional cycling network. Route 51 is a long-distance national cycling route that begins in Oxford and runs through Bedford and Cambridge where it passes through Fen Ditton and Horningsea, converging with route 11 which runs from King's Lynn to Bishop's Stortford.

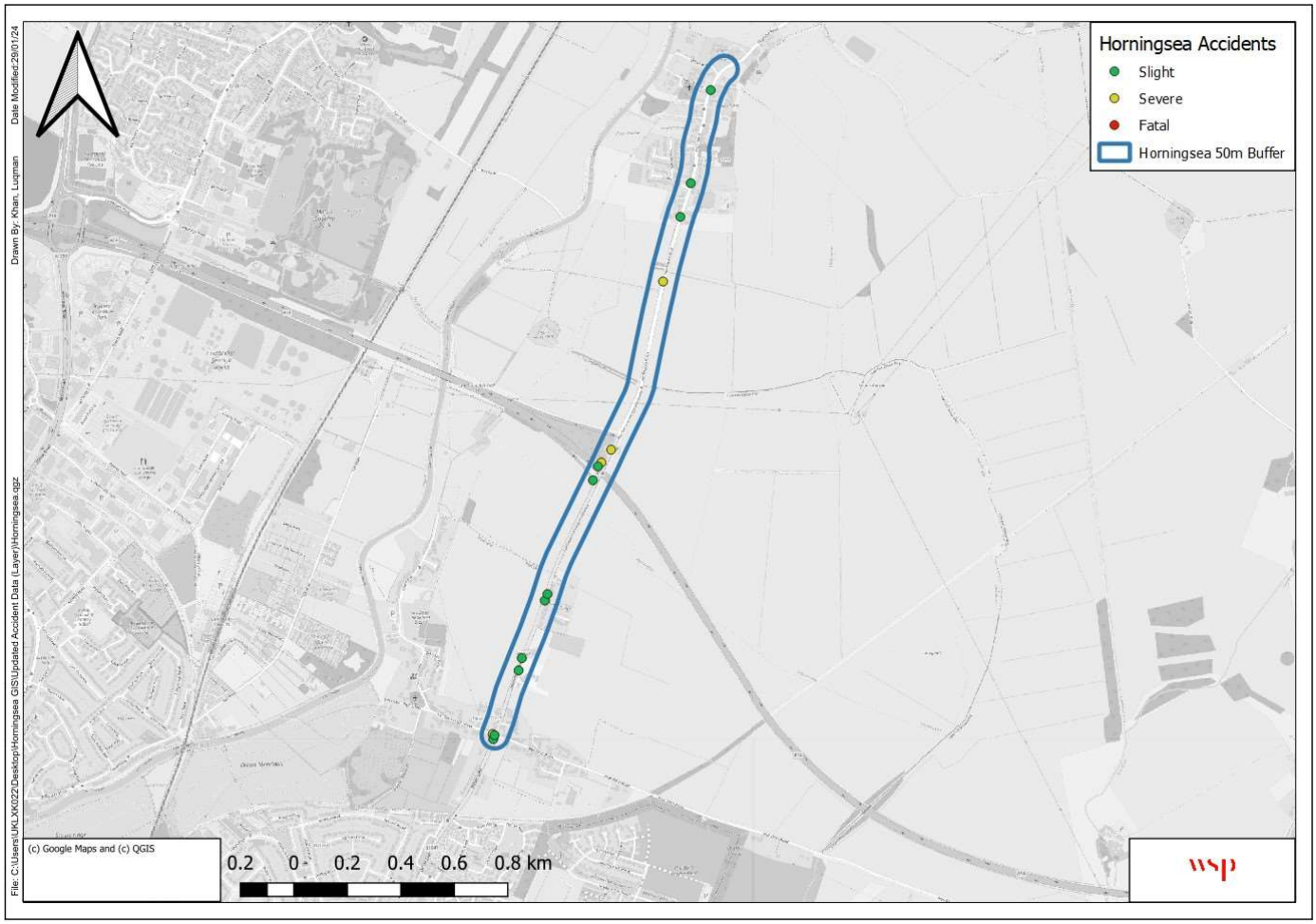
2.5.29 The quality of cycle infrastructure provision is, however, of variable quality with much of the cycle route off-road and unpaved. The existing Horningsea shared path is adjacent to the busy B1047, which presents a safety issue for cyclists. There is a lack of safe crossing locations along the existing routes for pedestrians and cyclists, particularly at the A14 crossing.

Road Safety

2.5.30 A study of accidents involving cyclists over the six-year 2016-22 time period indicated that there was 1 serious accident and 1 slight accident involving a cyclist on Fen Ditton High Street, as shown in Figure 2-11.

2.5.31 The main impediments to safety along the existing routes include surface quality, lack of safe crossing locations and absence of speed limits and traffic calming measures on shared routes.

Figure 2-11 - Accidents by Severity



Demand and Support for Active Mode Infrastructure

2.5.32 The Walking and Cycling Index[9] is delivered by Sustrans in collaboration with Cambridgeshire County Council and GCP. The results presented in the report for 2021 include local walking and cycling data and an independent survey of 1,296 residents aged 16 or above in Greater Cambridge.

2.5.33 It is evident from the report that leisure and destination-based trips are approximately equal in the Greater Cambridge region. Of all walking and wheeling[10] trips, 48% were undertaken by adults to a destination (such as work, school, shopping), 46% of trips were for enjoyment or fitness by adults and children and 6% were trips undertaken only by children to school.

[9] https://www.sustrans.org.uk/media/10484/greater-cambridge-walking-and-cycling-index-2021.pdf
[10] The Walking and Cycling Index recognises some people, for example wheelchair or mobility scooter users, identify with the term wheeling instead of walking. Therefore, the terms walking and wheeling together and consider walking and wheeling to include the use of mobility aids and pushchairs. All walking survey responses within this report include responses from people who wheel.

2.5.34 74% of the surveyed residents agree that more cycle tracks along roads, physically separated from traffic and pedestrians will support more liveable neighbourhoods. 68% support the creation of more low-traffic neighbourhoods and 65% agree that increasing space for people socialising, walking, and cycling on their local high street would improve their local area.

2.5.35 An increase in the number of people walking and cycling regularly (at least five days a week) from 2019 is noted. The counts from the River Cam Screenline monitoring showed that there has been an increase in the level of cycling in the city up to 2017, but there were signs of the trend levelling off in 2018.[11] The statistics from the Walking and Cycling Index also note that the number of people cycling in Greater Cambridge has stayed the same since 2019.

2.5.36 Barriers to cycling in Greater Cambridge are identified to be more pronounced for some user groups. Safety including road safety and personal safety is recognised as the single largest barrier to cycling. 50% of men cycle at least once a week as opposed to only 40% of women. While 49% of non-disabled people cycle at least once a week only 29% of disabled people cycle at least once a week.

2.5.37 Wider pavements, more frequent road crossings, with reduced wait times, nicer places along streets to stop and rest, better accessibility, fewer cars parked on pavements and reduced fear of crime and antisocial behaviour in the area have been noted as improvements that would encourage residents to walk more.

2.5.38 Similarly for cycling improvements such as traffic free routes, cycle tracks with physical segregation, signposted cycle routes along quieter roads, and better links to public transit are noted to encourage cycling.

Environmental Context

2.5.39 Implementation of the Horningsea Greenway scheme will encourage some mode shift away from motorised forms of transport resulting in a reduction in levels of traffic on the B1047 reducing the impact of greenhouse gases and health-related pollutants such as NOx and PM10. A healthier environment will contribute to meeting strategic aims of reducing greenhouse gas emissions and achieving Net Zero targets.

2.5.40 Construction of the Horningsea Greenway will also have Green Infrastructure and Natural Capital impacts. The scheme will be designed to provide and retain environmental, cultural, and social benefits including creating new and linking areas of habitat together. The net impact will be to create well-designed places that deliver on natural capital enhancements and biodiversity gain in line with the Cambridge Local Plan and Environment Bill.

Noise

2.5.41 Noise has a large impact on both the physical and mental health of those living and working near major road links such as the A14. Traffic noise can be a significant contributor to ambient noise levels; by delivering the Greenways and encouraging modal shift away from the car, noise levels in and around the scheme area can be expected to reduce.

[11] https://www.greatercambridgeplanning.org/media/1398/gclp-strategic-spatial-options-assessment-existing-transport-conditions-report-nov2020.pdf

2.5.42 Additionally, it is expected that the impact of the construction noise would be minimal and short lived due to the nature of the interventions proposed.

Air Quality

2.5.43 Horningsea Greenway scheme does not fall within any Air Quality Management Area (AQMA). However, the Cambridge AQMAs lies southwest of scheme approximately 1km from the village of Horningsea[12]. An Air Quality Management Area (AQMA) lies at the northern end of the scheme approximately 280m from the A603 / Grantchester Road junction.

2.5.44 AQMAs are areas declared by the council for monitoring and improvement where it has been found that air quality objectives are not being met. The delivery of the Horningsea Greenway will improve air quality locally by providing a cycling and walking infrastructure that encourages mode shift away from car travel.

Biodiversity

2.5.45 The Proposed Scheme does not fall within any ecological statutory designations, of which the closest Fenland Special Area of Conservation (SAC), is located approximately 8.5km away. Eversden and Wimpole Woods SAC are located approximately 14km northeast of the Proposed Scheme. There are six non-statutory designations within 2km of the Proposed Scheme and the potential for protected species have been assessed. Further ecological surveys for badgers will be required to confirm the presence and impact to such species. Additionally, the implementation of mitigation and enhancement measures, such as wildlife planting and log piling, will aim to reduce adverse impacts on potentially identified protected species.

Historic Environment

2.5.46 There are Conservation Areas[13] in Horningsea and Fen Ditton which the local councils have a duty to protect. The Horningsea Greenway passes through the Fen Ditton Conservation Area and Horningsea Conservation Area, as well as a Tree Preservation Area near Fen Ditton Primary School.

2.5.47 There are a number of designated heritage assets within a 50m study area of the Proposed Scheme, which include Fen Ditton Conservation Area, Horningsea Conservation Area, and a Grade II* and II listed buildings[14]. It is vital to preserve the setting of the historic buildings and open spaces and ensure that the development of any transport scheme contributes to this preservation. The Proposed Scheme has the potential to result in the partial or complete loss of buried heritage assets in areas where ground disturbance is proposed outside of the existing highway, principally relating to the construction of new footways, widening of current paths and the removal and planting of trees.

2.5.48 The proposed removal of the highway between the Grade II listed War Memorial and the churchyard in Fen Ditton would improve the immediate setting of the asset. The Proposed Scheme also presents opportunities for the enhancement of heritage assets through interpretation (e.g. trails and appropriate boards along the route), which should be explored.

[12] Department for Environment Food and Rural Affairs (n.d) Air Quality Management Areas. Available at: https://uk-air.defra.gov.uk/aqma/ [Accessed: 18/01/2023].
[13] https://www.scambs.gov.uk/planning/search-by-map/
[14] Historic England. (n.d) Conservation Areas. Available at: https://historicengland.org.uk/listing/what-is-designation/local/conservation-areas/ [Accessed: 18/01/2023].

2.6 Impact of not Changing

2.6.1 Without delivery of the Horningsea Greenway scheme, the car will remain the dominant mode of transport for commuting even for shorter trips that could be undertaken by active travel. There is a risk that existing demand for cycling declines due to an increasingly unattractive cycling environment, and reliance on the car will increase. Not only will this have negative consequences for local communities with increased congestion, but the environment will also suffer from high levels of greenhouse gas and carbon emissions, and physical and mental wellbeing will be negatively affected. The Cambridge City Deal objectives of developing active travel modes to support the planned travel needs of new housing developments and employment will also be adversely impacted.

2.6.2 Without the delivery of the Horningsea Greenway, the opportunity to realise net biodiversity gains will be reduced, resulting in a less attractive environment without an enhanced natural habitat. Delivery of the Horningsea Greenway is therefore key in meeting the challenges identified with the current situation, and as described below, in supporting national, regional, and local strategic priorities.

2.7 Strategic Need

2.7.1 The strategic need for the Horningsea Greenway is set out in this section. The key objectives are aligned with the Greenways Programme as a whole. Table 2-3 focuses on the more specific needs for the Horningsea Greenway.

Table 2-3 – Strategic Need for the Horningsea Greenway

Facilitating a growing economy	As the economy and population of Cambridge continues to grow, with the planned delivery of 33,480 new home and 44,000 new jobs by 2031, there is a strategic need to provide a sustainable transport network to cater for the increased demand. The Transport Strategy for Cambridge and East Cambridgeshire indicates that 11,500 new homes are needed in the area to keep up with rapid population growth, which will result in an increase in the number of people making road-based commuter trips into Cambridge including along the B1047 and A1134/A1303. Without the provision of a sustainable alternative, current levels of congestion will worsen, and journey times will increase on the local road network. In network terms the Horningsea Greenway links to the Bottisham and Swaffham Greenways at Fen Ditton via the existing Wadloes Path. Active mode provision continues towards Cambridge via the Chisholm Trail. This route provides an excellent off-road alternative to the A1303 (Newmarket Road). This will provide an incentive for both existing and new residents to consider switching mode from car to cycling. This will not only lessen the impact of traffic congestion as new residential developments are completed but encourage a shift by current car users to cycling. In the Economic Case an assessment of new to cycle demand as a result of the implementation of the Horningsea Greenway indicates that an uplift to existing cycle demand of 25% and pedestrian demand of 10% is anticipated.
Connecting the city with	Economic growth will correlate with a greater number of trips made, and therefore a greater demand on the road network if nothing changes. Without new sustainable

sustainable transport modes	transport interventions peak hour journey times in Cambridge are forecast to increase by as much as 90%. This traffic congestion will cause delays resulting in a fall in productivity. There is therefore a strategic need to reduce the number of trips made by car and provide a sustainable and active alternative transport solution. The Horningsea Greenway will provide a key element of this sustainable transport plan providing an improved cycling and walking corridors connecting the city with Horningsea. The Greenway will provide significant improved cycling connectivity. By providing a more direct sustainable transport connection between Horningsea and Cambridge, the Horningsea Greenway will encourage more walking and cycling trips. At a strategic level the Horningsea Greenway will link into the wider investment in active travel, including the Chisholm Trail, the other schemes in the Greenways network and cycling improvements as part of the cross-city cycling programme. The impact of this wider cycling connectivity will be to encourage significant mode shift to non-car modes. .
Sustainability Agenda	The 2030 Agenda for Sustainable Development, adopted by all United Nations Member States in 2015, provides a shared blueprint for peace and prosperity for people and the planet, now and into the future. At its heart are the 17 Sustainable Development Goals (SDGs), which are an urgent call for action by all countries, developed and developing, in a global partnership. They recognise that ending poverty and other deprivations must go hand-in-hand with strategies that improve health and education, reduce inequality, and spur economic growth. All while tackling climate change and working to preserve our oceans and forests. Horningsea Greenway supports the sustainability agenda as part of the overall Greenways project which promotes sustainable development of the Greater Cambridgeshire region by making cycling more attractive as a mode of transport. The enhanced active travel connectivity to employment and education provided by the Greenways encourages modal shift to sustainable modes of transport, it and further reduces inequitable access to opportunities by providing affordable travel options to education and job centres.
Decarbonisation Agenda	National policies outlined in Section 1.5 detail the strategic need to align with Net Zero targets through the Ten Point Plan for a Green Industrial Revolution, Gear Change, and the Cycling and Walking Investment Strategy. At a regional level, the Cambridgeshire and Peterborough Independent Commission on Climate outline the importance of acting on sustainable opportunities to improve air quality, greenspace, and meet Net Zero targets. The Horningsea Greenway has the potential to be a Net Zero carbon project by offsetting construction carbon and adhering to the strategic aims of the outlined policies. With 81% of NOx coming from road traffic in Cambridge, there is a strategic need for modal shift away from the private car towards more sustainable modes of cycling and walking. Through the delivery of the Horningsea Greenway a net reduction in highway-kilometres is expected as a result of modal shift to active modes, which in turn will lead to a net decrease in greenhouse gas emissions.

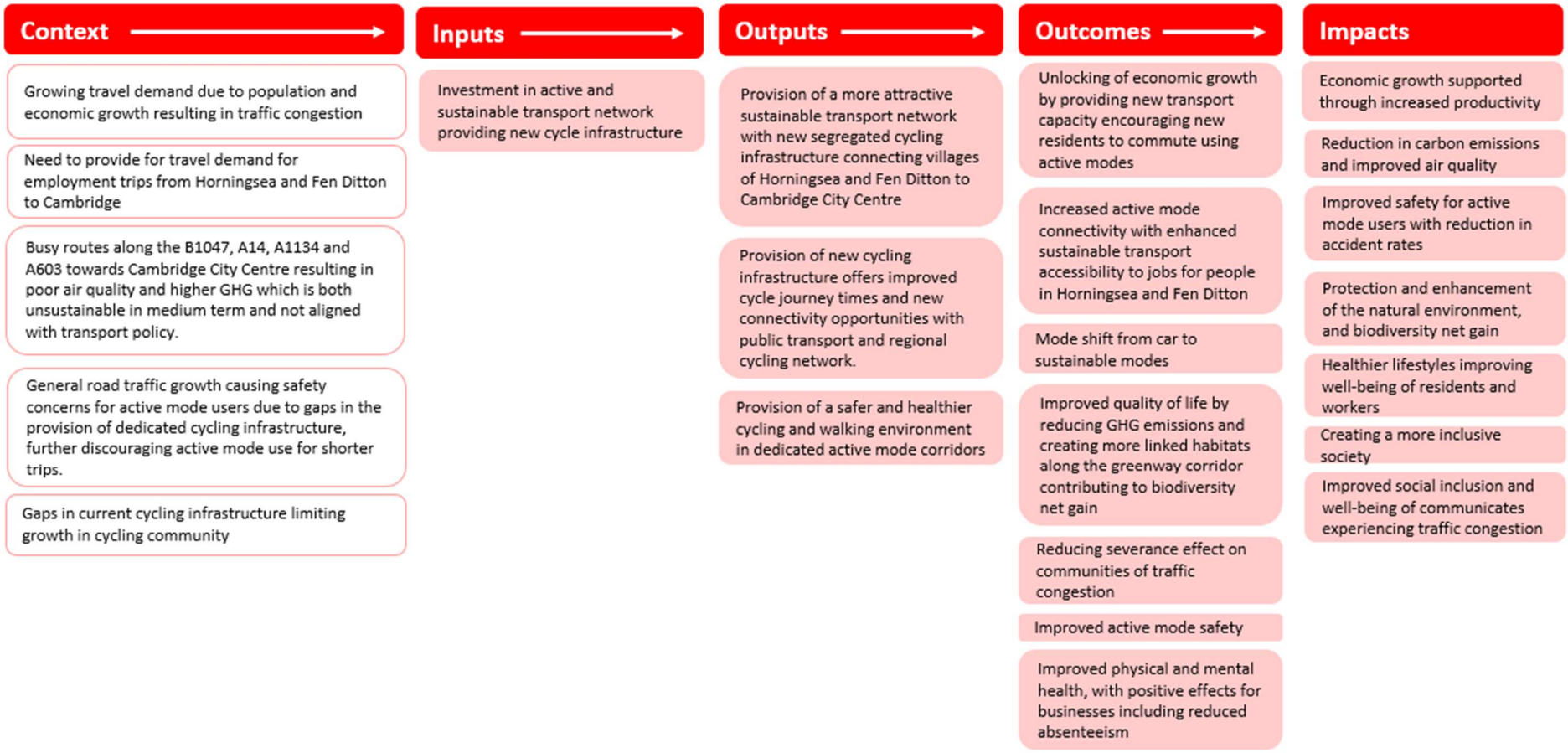
Delivery of Biodiversity Net Gain	In order to align with Net Zero targets, the principle of Biodiversity Net Gain (BNG) has been developed. Both the National Planning Policy Framework (NPPF) and the Government's 25 Year Environment Plan sets out the strategic need to incorporate net gains for biodiversity. This is detailed through the Environment Bill and the Town and Country Planning Act (TCPA), which present the requirement of a minimum 10% BNG. The Greater Cambridge Partnership takes the commitment to BNG further through its commitment of 20% as outlined in the Cambridge Local Plan. The Local Plan also details the importance of the maintenance of the Green Belt surrounding Cambridge, which will contribute to the biodiversity of the region. The Greenways project as a whole has strong potential to deliver positive gain for biodiversity. There are significant opportunities to achieve this by providing both wildlife corridors adjacent to the road network and prioritising the linking of areas of habitat together and creating new habitats where possible.

2.8 Strategic Objectives

Logic Mapping

2.8.1 The logic mapping process reflects the current situation, the strategic priorities established in the key national, regional, and local policies and the strategic needs. These relationships apply both to the overall Greenways Programme and individual schemes including the Horningsea Greenway. The exercise to map these factors and the opportunities has resulted in the identification of the objectives and planned impacts of the Horningsea Greenway project. This logic map is shown in Figure 2-12.

Figure 2-12 - Logic Map



2.9 SMART Objectives and Measures of Success

2.9.1 The Greater Cambridge City Deal (2014) outlines strategic objectives aimed at enabling a new wave of innovation-led growth by investing in the infrastructure, housing and skills that will facilitate the continued growth of the Greater Cambridge area. The City Deal will provide £1billion of local and national public sector investment to fund growth in Greater Cambridge, enabling an estimated £4bn of private sector investment in the Greater Cambridge area focussing on areas such as West Cambridge, supported by the implementation of enhanced cycling provision including the Greenways Programme.

2.9.2 Delivery of the Horningsea Greenway will further the strategic goals of the GCP through providing enhanced opportunity for active travel to new residents and commuters. With an increased number of people using active travel modes, levels of congestion will be reduced, and air quality and public health improved. Table 2-4 presents the Horningsea Greenway SMART strategic and operational objectives that are aligned with the overall Greenways Programme together with measures of success.

Table 2-4 – Horningsea Greenway SMART Objectives

Strategic Objectives	Operational Objectives	Measures of Success
Encourage commuting by sustainable transport modes and reduce traffic congestion Contribute to improved air quality and better public health	Capacity: Provide the cycle network capacity to accommodate increases in active travel demand due to new housing and employment growth	Increase in cycle network capacity Ability to contribute to a reduction in vehicular road traffic Propensity to reduce congestion/delay
	Connectivity: Improve accessibility to jobs and opportunities by active modes through a reduction in journey times and increase ease of interchange with public transport modes	Reduced journey time for cycling Scale of catchment (jobs, housing) Ability to unlock growth Ease of interchange with public transport
	Communities: Contribute to the creation of safe and attractive communities by reducing emissions, severance and the dominance of traffic improving personal security and road safety, further resulting in improved community health and wellbeing through uptake of active travel	Road safety Protection of green spaces; net biodiversity gain (across the Greenways programme) Environment (air quality and carbon reduction) Quality of the public realm Severance Increase in cycling and walking trips Improved public health and wellbeing

2.9.3 To plan for the successful delivery of the scheme, the following were monitored:

- Planning consents
- Phased programme of construction
- Dependencies understood and delivered

2.10 Scope

2.10.1 The Horningsea Greenway links north-east Cambridge to the village of Horningsea (to the north-east of the city). The 3.45km route includes the existing Wadloes Path and utilises a combination of existing roads (B1047 Horningsea Road), and off-road cycle track to provide a high-quality cycling route which will encourage the use of active travel in the corridor. The Horningsea Greenway active mode route provides an excellent off-road alternative to the A1303.

2.10.2 Although the whole Horningsea Greenway route extends for 3.45km, the scheme assessed in this business case excludes the Wadloes Path (3km section of the whole route) as this section already provides an attractive route for cyclists and pedestrians.

2.10.3 The Horningsea Greenway scheme comprises a 3km section from Horningsea village to the north end of Wadloes Path and a second short section – the 'Bow-tie' - to the south of Wadloes Path connecting into the Bottisham Greenway. The existing Section 1 off-road bridleway will become a shared path; Section 2 on-road 20mph street will become a quiet-road 20mph street; Section 3's existing shared use path will be widened, the Section 4 shared use path with segregated markings for cyclists will become a protected path, and the Section 5 off-road footpath will become a quiet-road 20mph.

2.10.4 From Fen Ditton, the Horningsea Greenway scheme connects with other walking and cycling improvements westwards to the Green Dragon and Riverside bridges which will connect active mode users to and from workplaces, schools, and shopping. The Horningsea Greenway scheme will also improve active mode links with central Cambridge via the Chisholm Trail which will provide connections to Cambridge Station to the south and Cambridge North station across the new Abbey-Chesterton bridge.

2.11 Complementary Schemes

2.11.1 There are complementary schemes which will support the development of the Horningsea Greenway by extending the network of cycling infrastructure across Cambridge and surrounding villages.

The Swaffhams Greenway

2.11.2 The Swaffhams Greenway connects Swaffham Prior to Swaffham Bulbeck and provides an onward link to Fen Ditton and Cambridge. The route runs past Stow-cum-Quy where it converges with the Bottisham Greenway and then continues to Fen Ditton. At this point the route joins the Horningsea Greenway and proceeds westwards to the Chisholm Trail at the Abbey-Chesterton bridge.

2.11.3 The Swaffhams Greenway scheme will provide a safe and attractive active travel route that will connect workplaces, local schools and colleges, shops, and transport hubs.

Bottisham Greenway

2.11.4 The 9.5 km long Bottisham Greenway connects Bottisham to Stow-cum-Quy, Newmarket Road, and Fen Ditton before continuing towards Cambridge city centre. The route proceeds along the A1303

and connects to the A14 underpass which will be easier and safer to use due to lighting and landscaping improvements.

2.11.5 The route converges with the Swaffhams Greenway and continues along High Ditch Road past the Wing housing development and connects to Ditton Lane which provides connection to Fen Ditton. At this point the route connects to the Horningsea Greenway, providing a safe and attractive active travel route separate from road traffic westwards on the wider active mode network into the city centre.

Cross City Cycling Project

2.11.6 In January 2015, the Executive Board agreed that the Cross City Cycling projects should form part of the City Deal programme. The Cross City Cycling project is a network of five cycling routes linking residents to workplaces and other centres of activity. These projects are as follows:

- Arbury Road
- Cambridge North Railway Station and Science Park
- Ditton Lane & Links to East Cambridge
- Hills Road and Cambridge Biomedical Campus
- Fulbourn/Cherry Hinton Eastern Access

2.11.7 The GCP has worked with partners in the County Council and contracted civil engineering companies to deliver these projects which aim to reduce congestion and encourage cycling as a healthier mode of transport. These projects located on radial routes in residential areas improved connectivity with the city centre and are complementary to the Greenways network connecting the city with the surrounding rural villages.

Cycling Plus

2.11.8 Cycling Plus is part of the GCP's investment in the active travel network. The GCP is already investing more than £115m in the active travel network and now through Cycling Plus they are looking to add to this, with up to £20m targeted at some of the key remaining gaps in the network.

2.11.9 GCP identified 13 corridors that could help join up the city's cycling network and selected two for investment following a public consultation in 2021. Hills Road is the first of these schemes to be consulted on. The proposals present two options for development to improve cycling and walking on the busy road connecting the city centre to Cambridge Station and Cambridge Biomedical Campus. The proposed improvements aim to make walking and cycling safer, easier, more attractive and more inclusive for all street users, and are complementary to the Greenways, improving local connectivity and better connecting the city centre's active travel network.

2.12 Strategic Impacts

2.12.1 This section discusses the economic, social, and environmental strategic impacts of investment in the Horningsea Greenway.

2.12.2 The Horningsea Greenway forms part of a wider policy of developing sustainable transport in the Greater Cambridge area. It contributes to the provision of a sustainable transport network that adds to transport capacity and connectivity essential to maximise the opportunities for housing and economic growth.

2.12.3 Reliance on the road network will increase congestion and delay as traffic growth occurs which will increase in frequency and impact, which investment in additional highway capacity, even if feasible,

will not be able to mitigate. Therefore, investment in high quality, safe, attractive, and comprehensive infrastructure to support pedestrians, cyclists and public transport users is essential to meeting this need.

Economic Impacts

2.12.4 From an economic standpoint investment in Horningsea Greenway will help reinforce Cambridge's competitive knowledge-based economy. It will provide employees in Horningsea and the other areas served by the Greenway with accessibility benefits due to the improved active mode linkage to the city centre. Segregated cycle infrastructure and reduced cycling times will make sustainable travel to work an attractive option for commuting. Associated with this there will be productivity benefits and reduced employee absences due to sickness. Furthermore, an active travel network is an attractive feature for future businesses looking to locate in Cambridge. Provision of the high-quality active travel corridor enables future-proofing behavioural change for sustainable travel use by connecting planned new housing and employment developments.

2.12.5 A secondary economic impact will be benefits to general road traffic in the congested transport corridors as continuing road users benefit from a reduction in road traffic levels and a reduced rate of growth in road traffic as others choose to use the Horningsea Greenway as an alternative transport corridor.

Social Impacts

2.12.6 The Horningsea Greenway will achieve health benefits by encouraging active lifestyles as residents switch to cycling. Physical activity will also have a positive impact on mental health too. The scheme will encourage modal shift resulting in reduced levels of congestion and hence creating a more pleasant living environment. The Horningsea Greenway will also improve the safety of both active travel and road network users through reduced congestion and a reduction in potential accidents involving cyclists.

Environmental Impacts

2.12.7 The Horningsea Greenway will encourage mode shift from motorised forms resulting in reduced levels of greenhouse gases and pollutants such as NOx and PM10. This will contribute towards achieving strategic aims of Net Zero targets and improving the air quality of surroundings.

2.12.8 There are also Green Infrastructure and Natural Capital impacts. The Horningsea Greenway will be designed to provide multiple environmental, cultural and social benefits. The net impact will be to create well-designed and beautiful places including habitat enhancement along Horningsea Road that deliver on natural capital enhancements and biodiversity gain in line with the Cambridge Local Plan and Environment Bill. A summary of the scheme benefits is shown in Table 2-5.

Table 2-5 – Scheme Benefits

Benefit	Description
Increased safety of the cycle network	Segregated travel away from general traffic on the congested road network will decrease the number of accidents.
Reduced road traffic for motorists	Users who continue to use the road network will benefit from a reduction in traffic volume and congestion, translating into journey time savings and improved access to jobs and services.
Environmental benefits	Improvement in air quality and carbon reduction as the Horningsea Greenway encourages a switch from motorised forms of transport and reduced levels of congestion.
Health benefits	A modal shift towards active travel will bring about numerous health benefits, both physical and mental. Access to an active-travel network will future-proof behavioural change.
Improved connectivity and accessibility	Improved access to a quality sustainable transport mode linking the city centre and the Horningsea corridor.

2.13 Option Development

Overview

2.13.1 The Horningsea Greenway scheme was developed through a process of identification, prioritisation, and consultation.

2.13.2 The Horningsea Greenway will provide an improved link to Fen Ditton as well as important connections to Chesterton via the Riverside bridge. Via the Chisholm Trail, users of the Horningsea Greenway will be provided with links to Cambridge North station and Cambridge station to the south. Widening of the shared-use paths along the B1047 (Horningsea Road), new signage, and landscape improvements will provide a convenient and safe route between Horningsea and Fen Ditton.

Option Assessment

2.13.3 Outline concept design-based work was carried out by 5th Studio, with support from JCLA (landscaping) and Allan Tyler (cost). Nigel Brigham carried out an independent review of the 5th Studio designs. The Horningsea Greenway initial designs went to public consultation between 16th September – 28th October 2019. A further engagement period took place between 21st November and 16th December 2022. The decision was made to combine the Horningsea, Bottisham and Swaffham consultations due to the close proximity of the villages and the interconnectedness of the routes.

Consultation

2.13.4 A multi-channel approach was taken during the Horningsea consultation and the public were asked their preferences regarding the individual elements of the proposed greenway route. In summary, the consultation results showed that 67% of the 143 respondents supported shared-use path

improvements from Horningsea to the A14, 57% supported the Horningsea village gateway element, and 56% supported improved signage and path widening at junction of the byway and Horningsea Road. Other elements were also well supported.

2.13.5 Through a 'bottom up' methodology, the GCP has engaged with local communities to ensure that routes meet the local needs of people and take advantage of local knowledge. Overall, local communities engaged positively and provided valuable feedback to help shape developments of the schemes. The key findings from the initial concept designs consultation are presented in Table 2-6.

Table 2-6 – 2019 Consultation

Consultation	Dates	Key findings
Initial concept designs	16th September – 28th October 2019	▪ Almost all the elements of the proposed route were supported, with the exception of element 2: 'Fen Ditton church road arm closure with landscaping around the churchyard entrance' which was supported by less than half of respondents and opposed by over a fifth. ▪ High support for the installation of solar studs in eight specific locations along the route ▪ Concerns were raised over the high cost of ongoing maintenance

2.13.6 The Horningsea Greenway in-person event was held on 6 December 2022 at the Horningsea Village Hall, with approximately 40 attendees present. The online session was delivered on Microsoft Teams on 1 December 2022. The goal of these events was to provide an update on the Horningsea Greenway's progress and to explain the scheme plans, while also providing an opportunity for people to meet the project team and ask questions.

2.13.7 In January 2023, the Horningsea Engagement Summary Report (HESR) was published, detailing the most recent feedback from Horningsea residents. The HESR summarised the feedback residents who expressed both support and reservations about the Greenway Scheme. Feedback included requests to further reduce the width of the carriageway at the farm entrance on the A14's southern side, introduction of further speed limits restrictions, and the provision of lighting.

2.13.8 The HESR engagement process covered both in-person and online events arranged to give stakeholders, residents, and the general public the opportunity to learn more about the plans. In total, 84 responses were received to the survey throughout the engagement process, in addition to two letters and six emails.

2.13.9 A summary of the main feedback noted during the events is provided below.

2.13.10 Issues raised included planned consultation on the Anglia Water scheme, vehicles parking on the cycle path during school pick-up (near Fen Ditton), availability of the scheme shared path to allow two bike lanes, concerns with regards traffic calming measures, space for additional cycle lanes, and conditions of roads (potholes). General feedback on the scheme included the need to improve the condition of neighbouring roads, as well as proposals for extending the route to connect with the Sustrans Cambridge to Bottisham cycle route which is part of the National Cycle Network. There were also concerns over parts of the scheme being unnecessary. Also raised was the scheme's interaction with the conservation area, as there was a desire to conserve village characteristics while minimising urban aspect.

2.13.11 Following consultation, the GCP determined that Wadloes Path was already of satisfactory standards in accordance with LTN 1/20. As a result, scheme proposals for Wadloes Path descoped from the Horningsea Greenway scheme.

Options

2.13.12 The initial proposals presented in the 2019 consultation material link Cambridge to Horningsea following existing shared-use cycle paths and quiet roads, with the aim to provide a high-quality alternative to a route alongside Horningsea Road.

2.13.13 The proposals included shared-use paths along most of the route, with new paths along the existing Fen Ditton Byway and where the Horningsea and Bottisham Greenway converge. Selective path widening, new signage and landscape improvements were proposed on some sections of the route, including the Wadloes Path 'Bow-Tie' section. New planting, new trees and adjustments to landscaping were also proposed for the scheme which will make the Horningsea Greenway route more attractive for users and support a wide range of wildlife.

2.13.14 Twelve potential bridge locations and associated approach routes for a new walking and cycling route between Horningsea and the riverside path on the west side of the River Cam were considered. The objective of such a link was to provide a high-quality route towards Cambridge (as an alternative to a route alongside Horningsea Road) and Milton.

2.13.15 After a review of the initial proposals, it was agreed that the focus of the scheme should be on a route via the existing path alongside Horningsea Road between Horningsea and the northern extent of Fen Ditton. This choice was made on the basis that the route would form a quieter, 'greener' alternative that would complement the recently completed improvements that provided a shared-use path along Horningsea Road through the village. Furthermore, a new cross-country route alongside the river was not considered to justify the additional land and cost acquisition required and would have a detrimental effect on the riverside footpath.

GCP Board Approval

2.13.16 In 2019, a summary of findings and final route options were presented to the public and the GCP Executive Board. The GCP Executive Board then considered the elements of the scheme and selected preferred attributes to be taken forward to the next stage of project development. Approval to proceed to planning and detailed design was granted by the Executive Board of GCP in June 2020.

2.13.17 Public engagement on the preliminary technical design was undertaken between 21st November – 16th December 2022. Site surveys were carried out and used, alongside feedback, to finalise the preliminary design before starting the detailed design.

2.13.18 The Joint Assembly on 9 March 2023 endorsed the next steps for the Horningsea Greenway with the approval of the construction of scheme early works in 2023. The Joint Assembly also confirmed approval for the Horningsea Greenway to progress to detailed design.

2.13.19 On 28 September 2023, the Executive Board agreed the programme of delivery for Horningsea Greenway.

2.13.20 Detailed design and construction packs were completed towards the end of 2023 and early 2024.The Horningsea Greenway scheme construction programme is underway and scheduled to be completed in 2024.

Constraints

2.13.21 The following significant constraints on the delivery of the scheme were identified in the course of scheme design during OBC stage:

- Obtaining the rights for use and construction of the Greenway, which may involve private landowners.
- The need to ensure continuity, which can involve the need for high quality crossings of roads and other barriers.
- The need to satisfy planning requirements, which including habitat, flooding, and other issues.

2.13.22 These constraints were addressed through the development of the scheme and engagement with stakeholders including feedback from the 2022 consultation held between 21 November and 16 December 2022.

2.13.23 At FBC stage of the business case there were updates to these constraints as set out below:

- All the proposals are within Highway land and hence there is no involvement of private landowners
- Continuity of the route was considered and no additional crossings have been proposed.
- No planning requirements are needed as the route is within Highway land. The landscape design is reduced to the Bow-tie section and the area at the church. Any flooding identified will be resolved as part of the resurfacing works.

Next Steps

2.13.24 The next stages in the scheme development are:

- Construction
- Scheme opening
- Monitoring and evaluation post-implementation

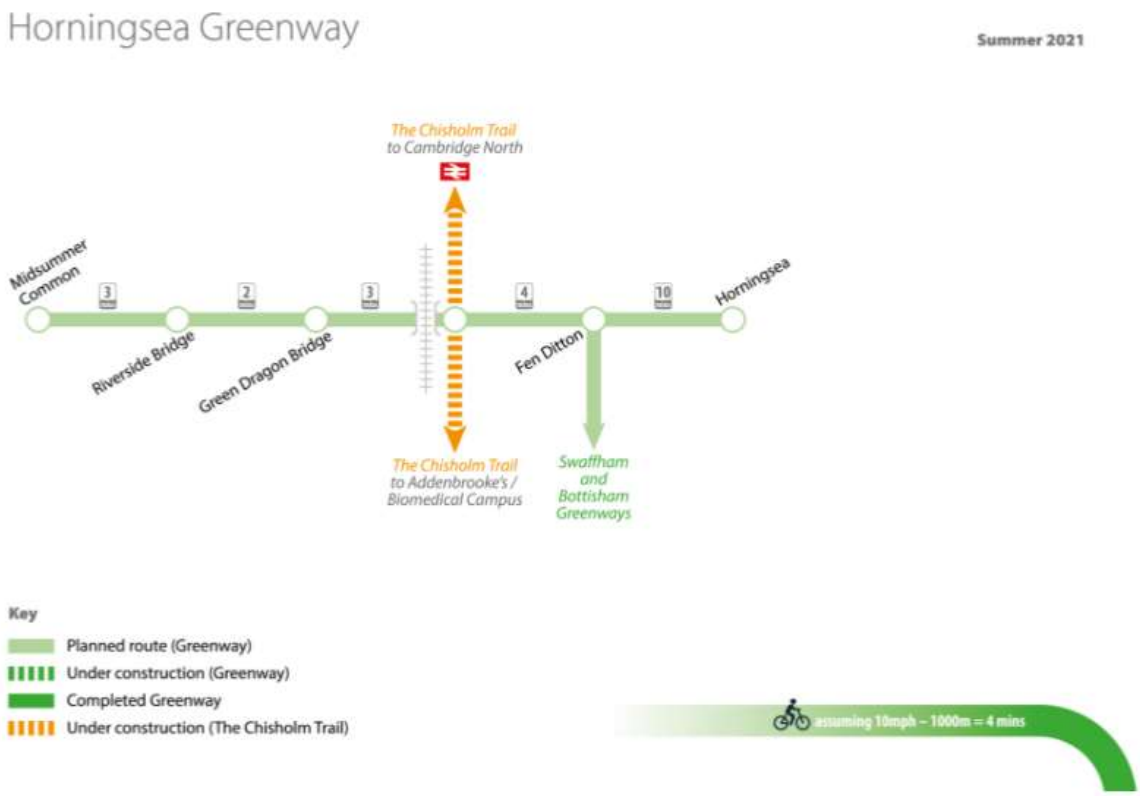
3 Economic Case

3.1 Introduction

3.1.1 The Economic Case identifies the impacts of the scheme to inform the assessment of the Value for Money (VfM). It considers the impacts that can be measured and quantified, and those which can be assessed qualitatively. To assess the VfM, these impacts have been compared to the scheme costs.

3.1.2 The Horningsea Greenway will be an improved walking and cycling route between Horningsea, Fen Ditton and Cambridge. The Horningsea Greenway is one route within a wider and developing sustainable travel network that is being created by the Greater Cambridge Partnership. The Greenways network will run through many different environments. These range from quiet rural settings along field edges or country lanes to busier built-up urban locations that may have more limitations on space. Within each environment the Greenways project aims to deliver a safe, attractive, and cost-effective sustainable travel route which users can enjoy all year round.

Figure 3-1 - Horningsea Greenway Scheme[15]



[15] https://www.greatercambridge.org.uk/sustainable-transport-programme/active-travel-projects/greater-cambridge-greenways/horningsea-greenway

Table 3-1 – Summary of Scheme Elements

Element	Infrastructure
Walking & Cycling	▪ Quiet Roads – speed limits reduced to 20mph ▪ Traffic calming – raised tables and removal of centre lining ▪ Protected path – a 3-metre-wide path with features that separate cyclists and pedestrians. ▪ Shared use paths – a 3-metre-wide path with a 2-metre grassy strip running parallel. Where the path runs beside the carriageway a green verge will separate the path from the road, this will be as wide as possible. ▪ Signage – Greenway specific wayfinding marker posts could be placed at regular intervals and junctions. ▪ Surfacing – Routes will be made from a hard, smooth surface.
Public Realm	▪ Lighting – solar studs could be used at specific points to aid wayfinding in low light ▪ Maintenance – a maintenance package for the route is being planned

3.1.3 Detailed drawings of the scheme measures are included within Appendix A.

3.1.4 The appraisal considers the incremental benefits of the intervention, comparing the benefits (and costs) of the scheme against the without scheme case.

3.2 Approach to Economic Appraisal

3.2.1 The appraisal has been undertaken in alignment with the principles of the HM Treasury Green Book and the Department for Transport (DfT) Transport Analysis Guidance (TAG) for schemes of this nature. As set out in these guidance documents, the appraisal of the scheme will be largely undertaken in line with guidance of, the following:

- TAG Unit A1-1 (November 2023): Cost-Benefit Analysis
- TAG Unit A1-2 (November 2023): Scheme Costs
- TAG Unit A1-3 (May 2022): User and Provider Impacts
- TAG Unit A4-1 (November 2022): Social Impact Appraisal
- TAG Unit A4-2 (May 2023): Distributional Impact Assessment
- TAG Unit A3 (November 2023): Environmental Impact Appraisal
- TAG Unit A5-1 (November 2022): Active Mode Appraisal
- DfT Value for Money Framework

3.2.2 The appraisal of the scheme considers both the impacts that can be quantified, and monetised, as well as those that can only be assessed qualitatively. Considering the range of proposals along the corridor, various appraisal techniques have been used to assess the impacts which can be quantified. All benefits and costs have then been consolidated in a wider economic appraisal model.

3.2.3 In line with TAG, all costs and benefits in the appraisal have been presented in 2010 Present Values (PV), market prices. Costs and benefits have been deflated to 2010 prices using the GDP Deflator forecasts within the TAG Data Book v1.22 and discounted to 2010 values using the social discount rates also within the TAG Data Book. The market price adjustment factor of 1.19 from the TAG Data Book has been used to convert from factor prices to market prices.

3.2.4 It has been assumed that the scheme opening year is 2024. The impacts have been considered over a 20-year appraisal period. TAG Unit A1-1 Cost Benefit Analysis states that the appraisal period should ‘cover the period of usefulness of the assets encompassed by the options under consideration’.

3.2.5 The following sections set out the approach employed to appraise the various elements of the scheme.

Active Mode Appraisal Toolkit

3.2.6 In line with TAG Unit A5-1, the DfT's Active Mode Appraisal Toolkit (AMAT) (November 2023 update) has been used to estimate the benefits associated with improved cycling infrastructure along the proposed Horningsea Greenway. The tool considers the benefits in terms of physical activity, absenteeism, journey quality, environmental, indirect tax, and congestion.

3.2.7 The current and anticipated scheme demand is input to the AMAT, as well as the change in infrastructure provision. Combining this with a number of assumptions from the National Travel Survey (NTS) regarding journey length, journey speed, purpose split and cycling diversion factors, the tool outputs the benefits associated with the intervention. The scheme costs can also be input to the tool such that the Benefit to Cost Ratio (BCR) can be calculated, however for this submission the benefits and costs have been brought together in the economic appraisal model. A wider appraisal model was used so that a number of benefit streams could be collated and then subtracted with the scheme costs to produce an overall BCR for the scheme.

3.2.8 One assumption in the AMAT was refined to represent the local conditions more accurately in Cambridge, as outlined below.

Table 3-2 – Refined Assumptions

	Default Assumption	Altered Assumptions	Rationale
Number of days for which intervention data is applicable per year	253 days	305 days	Count data demonstrates that levels of demand in the corridor on Saturdays are broadly equivalent to weekday levels

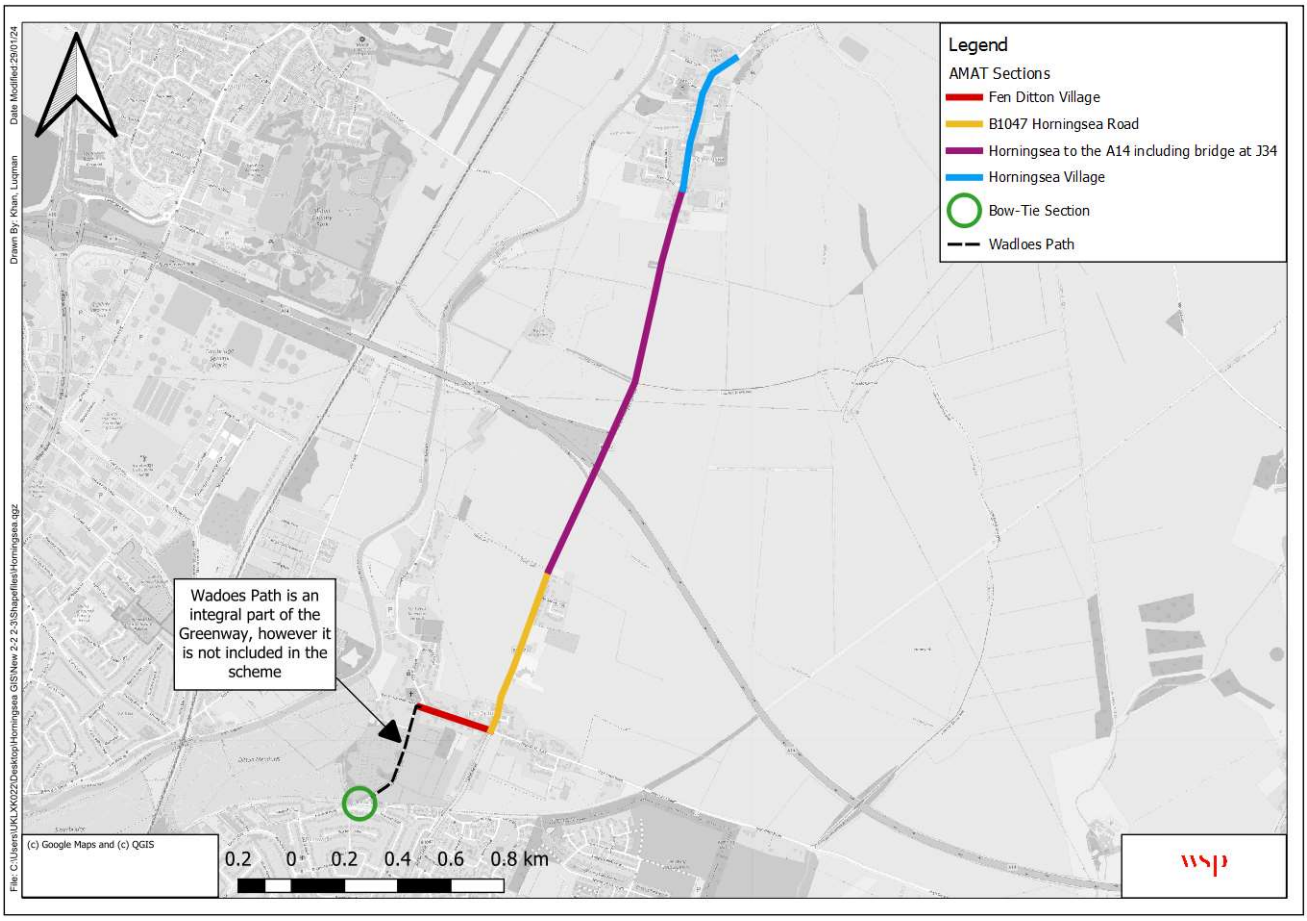
3.2.9 In line with DfT guidance and to ensure the scheme benefits were not double counted, the AMATs were split into sections depending on the type of existing and proposed infrastructure present along the corridor. For example, the AMAT requires an input of how much of an average cycling trip will use the intervention, where the length of an AMAT section is divided by average trip length (5.71km). This allowed the route to be broken by length, ensuring benefits were not replicated. The sections are set out in Table 3-3.

Table 3-3 – Summary of AMAT Sections

Section	Description	Length of Route	Existing Infrastructure	Proposed Infrastructure
1	Bow-Tie Section	0.14km	Public Footpath/ quiet road	3m widened shared use path
2	Fen Ditton Village	0.28km	Quiet road	A quiet road, where vehicle speeds are limited to 20mph, with wayfinding and maintenance repairs
3	B1047 Horningsea Road	0.64km	Shared use path	3m widened shared use path
4	Horningsea to the A14 including bridge at J34	1.53km	Shared use with segregated markings for cyclists	3m widened shared use path
5	Horningsea Village	0.55km	Country Road, 40mph speed limit	Quiet road with 20mph speed limit

3.2.10 The sections discussed above are also shown in Figure 3-2 below.

Figure 3-2 - AMAT Sections

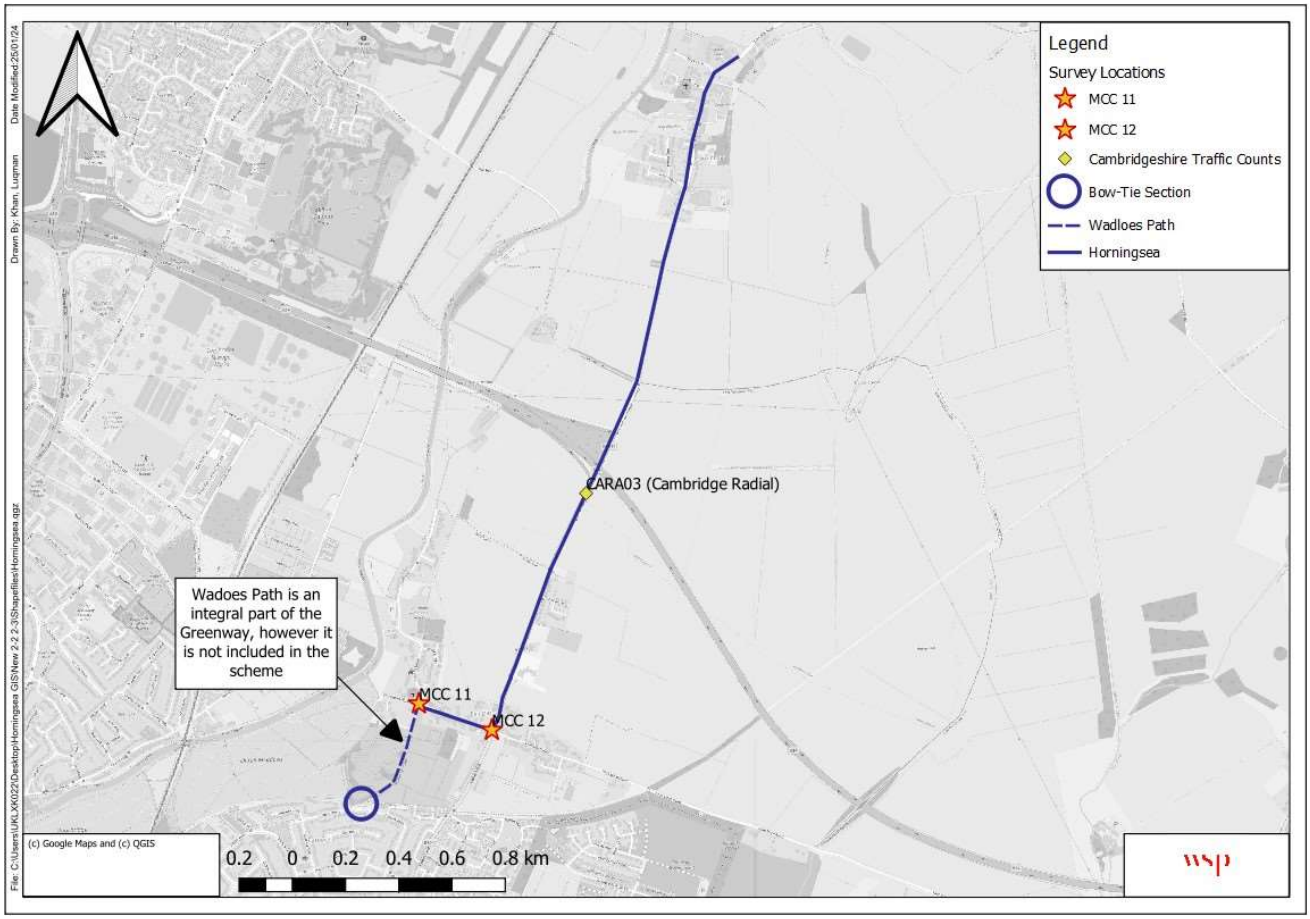


3.2.11 The following sections discuss the approach to using the AMAT toolkit in this submission.

Existing Demand

3.2.12 The AMAT requires the existing and scheme induced demand to be included as an input. To establish the existing cycling demand along the Horningsea Greenway route, Manual Classified Turning Counts (MCCs) were carried out along the route to gauge walking and cycling demand. Cambridge Annual Radial (CARA) survey which is an annual, one-day survey usually undertaken in October/November. CARA03 count site is along the Horningsea Road (south of the bridge). Figure 3-3 outlines the locations of the MCCs and CARA03 site locations.

Figure 3-3 - Horningsea Count Data Locations



3.2.13 The Manual Classified Counts (MCCs) provided existing demand for sections 1, 2 and 3. The MCC was collected between 0700-1000 and 1500 to 1900, a total of 7 hours. Sections 4 and 5 are along the Horningsea Road. The existing demand for these sections is derived from the average of 2019 to 2022 CARA03 12-hour data provided by Cambridgeshire County Council. Due to the low demand in 2022 for the pedal cycles, assumed an average of the available data from 2019 to 2022 to estimate the cycle and walk demand for Horningsea sections.

3.2.14 As AMAT assumes a 24-hour flow as input to calculate benefits, the MCCs were factored up to 24-hour flows. This adjustment used 24-hour count data collected in March 2022 on Vinery Road, Cambridge. The flows have been annualised within the AMAT, using an annualization factor of 305

days. The selected Table 3-4 below outlines the cycling and walking demand used for each AMAT section.

Table 3-4 – AMAT Demand (Daily Trips – 24 Hours)

Section	Description	Source	Cycling Demand	Pedestrian Demand
1	Bow-Tie Section	MCC 11	394	191
2	Fen Ditton Village	MCC 12	256	239
3	B1047 Horningsea Road	MCC 12	293	492
4	Horningsea to the A14 including bridge at J34	CARA03	150	57
5	Horningsea Village	CARA03	150	57

3.2.15 Table 3-4 demonstrates that there is a variable demand level across the Horningsea Greenway corridor, with higher demand levels seen on off-road footpaths, and lower demand along sections of the B1047 Horningsea Road. For example, demand is higher along the Bow-Tie section (which connects to the existing Wadloes Path) and Fen Ditton-B1047 Horningsea Road junction. The difference in cycling and walking demand at Section 4 compared to Section 3 (both along B1047) is likely to be due to school trips to Fen Ditton Community Primary School.

Scheme Induced Demand

3.2.16 To estimate the scheme induced cycling demand, an uplift percentage of 25% was used, which was derived from pre- and post-implementation traffic surveys from several comparable schemes outlined in the GCP Impact Evaluation Evidence Paper (2019)[16], Cycle City Ambition Programme (2013-2018)[17], and Outcomes of the Cycling City and Town Programme (2017)[18], including:

- Arbury Road (Cambridge) – Traffic lanes narrowed to 2.6m with removed centre line and kerb lines moved to accommodate new raised cycleway as well as carriageway / footway resurfacing.
- Links to east Cambridge – shared foot and cycleway, parking restrictions and carriageway resurfacing.
- Filwood Greenway (Bristol) – mixed strategic route including off road cycle track though green space.

3.2.17 A walking demand uplift of 10% was used, which was derived from an average of case studies outlined in Making the Case for Investment in the Walking Environment (2011).[19] Examples from this study include:

- Kensington High Street
- Five Roads Home Zone, Ealing

[16] GCP Impact Evaluation Evidence Paper (2019)
[17] Cycle City Ambition Programme 2013-18
[18] https://www.sustrans.org.uk/media/2970/2970.pdf
[19] https://www.livingstreets.org.uk/media/1394/2011-making-the-case-full-report.pdf

- Wanstead High Street Walking Improvements

3.2.18 The demand forecasts are show in Table 3-5.

Table 3-5 – Horningsea Greenway Demand Forecasts (24 hours)

Section	Description	Cycling demand	Pedestrian demand
1	Bow-Tie Section	493	210
2	Fen Ditton Village	320	263
3	B1047 Horningsea Road	366	541
4	Horningsea to the A14 including bridge at J34	188	63
5	Horningsea Village	188	63

Intervention

3.2.19 The AMAT allows the existing infrastructure for the route to be selected, and the proposed new infrastructure. Within the tool, the options that can be selected to capture this before and after state include:

- No provision
- Shared bus lane
- Wider lane
- On-road non-segregated cycle lane
- On-road segregated cycle lane
- Off-road segregated cycle track

3.2.20 The AMAT toolkit classifications for existing and proposed infrastructure only capture a certain number of cycle interventions and therefore the most comparable selection was made in the toolkit according to examples outlined in the user guidance. For example, the proposed infrastructure for the route includes several sections of shared use footways, which is not specifically a selection in the AMAT Toolkit and has therefore been categorised as ‘off-road segregated cycle track’. This category was selected as AMAT user guidance states that an off-road segregated cycle track is ‘a path or track with right of way for pedal cycles that is separate to the road, typically with a level difference (that may or may not also be useable for pedestrians)’. For sections that include light touch on road measures such as sinusoidal speed humps, reduced speed limits and carriageway markings, ‘shared bus lane’ has been selected in order to differentiate these sections from existing on road sections, which have been classified as ‘no provision’. Table 3-6 below outlines the type of existing / proposed infrastructure for each section of the route, alongside the subsequent classification for each section in the AMAT Toolkits.

Table 3-6 – Type of infrastructure / AMAT classification

Section	Type of Infrastructure (Existing / Proposed)	AMAT Classification (Existing / Proposed)
1	Off road bridleway / Shared path	Off-road segregated cycle track / Off-road segregated cycle track
2	On road, 20mph street / Quiet Road, 20mph street	No Provision / Shared Bus Lane
3	Shared use / Widened shared path	No Provision / Off-road segregated cycle track
4	Shared use with segregated markings for cyclists / Protected path	Off-road segregated cycle track / Off-road segregated cycle track
5	Off road footpath / Quiet Road, 20mph street	No Provision / Shared bus lane

3.2.21 The AMAT requires the average proportion of a trip which uses the scheme infrastructure to be input. This has been calculated by comparing the length of each section to the average length of a cycle journey (5.71km).

Outputs

3.2.22 The output of the AMAT tool are the monetised impacts of the infrastructure under the following headings in 2010 PV:

- Congestion benefit
- Infrastructure
- Accident
- Local air quality
- Noise
- Greenhouse gases
- Reduced risk of premature death
- Absenteeism
- Journey ambience
- Indirect Tax

Accident Reduction

3.2.23 Accident data was obtained along the Horningsea Greenway corridor for the period between 2016 and 2022. During this period, two accidents occurred along the corridor in total, with one being slight (involving pedestrian) and one serious (involving cyclist).

3.2.24 The scheme proposals include improved cycle facilities along the corridor, such as:

- Introducing new off-road cycle paths
- Traffic calming including:
  - Reducing speed limits from 30mph to 20mph
  - Raised tables
  - Proposed cycle markings

3.2.25 Due to greater separation between cyclists and vehicles and reduced vehicles speeds, the scheme proposals are expected to lead to a reduction in road collisions involving cyclists.

3.2.26 Following analysis of these collisions, one serious collision was considered to have been avoidable with the scheme in place. This was then divided to determine a yearly average, and then multiplied against the TAG values for accidents by severity, as shown in Table 3-7.

Table 3-7 – Accident Savings by Severity

	Accident Savings by Severity		
	Fatal	**Serious**	**Slight**
Cost of a casualty (£, 2010, TAG Databook v1.22)	-	£210,645	£21,470
Number of collisions involving cyclists	-	1	1
Number of cycle accidents that may have been prevented by the scheme (5 years)	-	1	0
Number of prevented cycle accidents per annum	-	0.2	0
Accident savings per annum (£, 2010)	-	£ 42,129.00	£ 21,064.50

3.2.27 This annual value of accident saving was then projected and discounted in the appraisal model for a 20- year period. The results are presented in the appraisal results section below.

Non-monetised impacts of the scheme

3.2.28 There are a number of elements of the scheme for which the impacts cannot be quantified and monetised, these include:

- Reduced speed limits – the Horningsea Greenway includes traffic calming measures reducing speeds to 20mph
- Maintenance – a maintenance package is planned for the Horningsea Greenway. This will be carried out with reference to the GCP Greenways Maintenance Guidance. However, the maintenance costs rates by type of active mode infrastructure have not yet been assessed by the GCP.

3.2.29 Where appropriate, these elements of the scheme are considered within the Environmental and Social Impacts sections of the Economic Case.

Scheme Costs

3.2.30 It is estimated that the Horningsea Greenway scheme will cost in the region of £2.49m, based on direct construction works, design and other fees, risk contingency and inflation.

3.2.31 Indirect construction costs include main contractor's preliminaries, traffic management, overheads, and profit. Indirect non-construction costs include Stats and professional fees.

3.2.32 Further detail on the estimation of the scheme costs is presented in the Financial Case. The cost profile of the scheme used in the economic appraisal is outlined in Table 3-8 below.

Table 3-8 – Cost Profile, £, Q4 2024 Prices

Cost	With Risk and Contingency	Without Risk and Contingency
Total Cost	**£2,671,030.87**	**£2,136,030.87**

3.2.33 The following investment costs have been considered:

- Construction costs
- Professional Fees

3.3 Economic Appraisal Assumptions

3.3.1 The main appraisal assumptions are set out in Table 3-9.

Table 3-9 – Economic Appraisal Assumptions

Criteria	Assumption	Source
Opening year	2024	GCP
Base year	2010	DfT Base Year
Appraisal period	20 years	AMAT default
Discount rate	3.50% 0-20 years	November 2023 TAG Data Book v1.22 (A1 1.1)
GDP Deflator	138.67	November 2023 TAG Data Book v1.22 (Annual Parameters)
Existing path cycle demand	See Table 3-4 for a breakdown of demands used	Count Data
Scheme induced cycle demand	25%	Schemes outlined in GCP Impact Evaluation Evidence Paper Cycle City Ambition Programme 2013-2018
Existing path pedestrian demand	See Table 3-4 for a breakdown of demands used	Count Data
Scheme induced pedestrian demand uplift	10%	Living Street: Making the Case for Investment in the Walking Environment
Journey purpose split	Business: 12.1% Commuting: 25.5% Other: 62.5%	November 2023 TAG Data Book v1.22 (A1.3.4 – Cell J27)
Values of time	Commuter – 9.95 Other – 4.54 (£,2010)	November 2023 TAG Data Book v1.22 (A1.3.2 – Cell AX27)
Market price adjustment factor	1.19	November 2023 TAG Data Book v1.22 (A1.3.1 – Cell C16)
Optimism bias on capital costs	20%	TAG Unit A1-2
Cost spend profile	2024	WSP

3.4 Appraisal Results

Present Value of Benefits

3.4.1 The tables below show a summary of the results of the appraisal for each element of the scheme by area of interventions.

Cycling and Pedestrian Provision

3.4.2 Table 3-10 shows the monetised benefits associated with the improved cycling and walking infrastructure which includes new off-road cycle paths, improvements to existing cycling infrastructure, footway widening and improved pavement evenness.

Table 3-10 – Cycling and Pedestrian Monetised Benefits

Cycling and pedestrian provision	£, 2010 PV over 20-year appraisal period
All Sections Combined	
Congestion	25,055
Infrastructure	815
Accident	6,112
Local air quality	321
Noise	328
Greenhouse gases	13,036
Reduced risk of premature death	1,691,803
Absenteeism	248,834
Journey ambience	77,198
Indirect taxation	-1,591

3.4.3 The largest benefit associated with the increased number of cyclists as a result of the scheme is the health benefit through increased physical activity including reduced risk of premature death. Absenteeism accounts for the second largest benefits impact followed by journey ambience. There are decongestion benefits as a result of modal shift from private car to cycling, and associated impacts – fewer road accidents, improved air quality, reduced noise and reduced greenhouse gase emissions. The scheme benefits are in line with the objectives outlined in the strategic case including encouraging commuting by sustainable modes and reducing traffic congestion as well as contributing to improved air quality and better public health. The reduction in private car use has a negative impact on indirect tax revenues to central government due to the impact of mode shift resulting in less road traffic and a consequent reduction in fuel duty. However, the reduction of car trips is considered a positive when considering the strategic objectives of the scheme.

Accidents

3.4.4 Table 3-11 below shows the benefits of the scheme induced accident reduction.

Table 3-11 – Accident Benefits

Impact	£, 2010 PV over appraisal period
Accidents (Collision savings)	£ 762,326.35

3.4.5 The scheme proposals, which include greater separation from general traffic for active modes, is estimated to result in a total saving of £0.76m as a result of fewer collisions involving cyclists over the 20-year appraisal period. This is in addition to the accident benefit estimated in AMAT which results from a reduction in highway-kilometres due to mode shift to active modes.

Present Value of Costs

3.4.6 The cost assessment included direct construction costs, indirect construction costs, indirect non-construction costs. Inflation has not been factored into the pricing of the scheme, as it is based on 2024 prices, with completion and opening of the scheme scheduled for the same year.

3.4.7 For the economic appraisal optimism bias has been applied to the scheme costs to reflect the systematic tendency to underestimate scheme costs. In July 2021, DfT adjusted the methodology for how optimism bias should be applied within the economic appraisal. The revised guidance (TAG Unit 1.2) states that the base costs with optimism bias applied should be compared to the risk-adjusted cost. The costs should be similar, but if there is a large disparity, the higher costs should be used. Due to a low variation between the two costs, the base cost with optimism bias has been used as the core scenario for the appraisal. A sensitivity test has been included with risk-adjusted costs.

3.4.8 TAG Unit A1-2 provides guidance for the recommended level of optimism bias to be applied for different types of projects at different stages of the scheme development. For a scheme of this nature, at the FBC stage, a 20% optimism bias has been applied to the base scheme costs within the economic appraisal.

3.4.9 Following the application of optimism bias, the scheme costs have been adjusted to produce costs consistent with the benefits, namely in 2010 prices and values, with the market factor adjustment applied.

3.4.10 The present values of the scheme costs are shown in Table 3-12.

Table 3-12 – Present Value Costs

	£,2010 PV
Present Value of Costs (PVC)	£ 1,661,028.76

3.5 Value for Money Statement

3.5.1 The core scenario benefits and costs described above produce a benefit to cost ratio (BCR) of 1.7:1, as presented in Table 3-13 below.

Table 3-13 – Economic Appraisal, Core Scenario, £2010 PV

Benefit / Cost Type	£ 2010 PV, 20-year appraisal
Noise	328
Local air quality	321
Greenhouse gases	13,036
Journey quality	77,198
Physical activity	1,940,637
Accidents	6,112
Economic efficiency: commuters	6,386
Economic efficiency: other	15,647
Economic efficiency: business users and providers	3,021
Wider public finances (indirect tax)	-1,591
Present Value of Benefits (PVB)	**2,823,423**
Present Value of Costs (PVC)	**1,661,029**
Net Present Value (NPV)	**1,162,394**
Benefit-Cost Ratio (BCR)	**1.7**

3.5.2 Appendix B provides the disaggregation of results in the Transport Economic Efficiency (TEE), Public Accounts (PA) and Analysis of Monetised Costs and Benefits (AMCB) tables.

3.6 Sensitivity Tests

3.6.1 Sensitivity testing has been undertaken to explore the sensitivity of the expected outcomes of the appraisal to changes in inputs. The following sensitivity tests have been carried out, drawing on the key assumptions made in the core scenario:

- Test 1: New to cycle demand reduced to 20%
- Test 2: New to cycle demand increased to 12.5%
- Test 3: New to cycle demand reduced to 30%
- Test 4: No pedestrian demand uplift
- Test 5: 30-year appraisal
- Test 6: New to cycle demand increased to 75%

3.6.2 The PCT Go Dutch (ambitious) scenario was identified as an appropriate measure for an additional sensitivity test on the appraisal . The Go Dutch scenario uses Dutch cycling (and walking) propensities, so represents cycling in Cambridge if resident commuters cycled as much as the Dutch would for trips of the same length and hilliness.

3.6.3 A 75% demand uplift was calculated based on the Go Dutch scenario.

3.6.4 The table below shows the impact on PVB, PVC, NPV and BCR of each of these tests compared to the BCR for the core scenario.

Table 3-14 – Sensitivity Analysis

Test	PVB (£m)	PVC (£m)	NPV (£m)	BCR
Core Scenario	**2.823**	**1.661**	**1.162**	**1.7**
Test 1: 20% new to cycle demand uplift	2.609	1.661	0.948	1.6
Test 2: 12.5% new to cycle demand uplift	1.986	1.661	0.324	1.2
Test 3: 30% increase in new to cycle demand	3.189	1.661	1.528	1.9
Test 4: No pedestrian demand uplift	2.565	1.661	0.904	1.5
Test 5: 30-year appraisal period	3.918	1.661	2.258	2.4
Test 6: New to cycle demand increased to 75% demand uplift	5.555	1.659	3.895	3.3

3.7 Environmental Impacts

3.7.1 The section below sets out the appraisal of the active travel elements of the scheme considering the environmental impacts set out in TAG Unit A3. The Environment TAG worksheets are included in Appendix D.

Noise

3.7.1 Overall, the scheme is expected to reduce vehicle traffic as people transfer to foot or bicycle. Traffic noise would reduce accordingly. Based on the outputs of the AMAT, the monetised impact on noise of modal shift from private car is estimated to be £328 (2010 PV).

3.7.2 Given the nature of interventions, the impact of construction noise is expected to be minimal and short lived.

Air Quality

3.7.3 Modal shift to cycling and walking, and associated reduced road traffic, will result in locally improved air quality. Based on the outputs of the AMAT, the monetised impact on air quality of modal shift from private car is estimated to be £321 (2010 PV).

Greenhouse Gases

3.7.4 The net reduction in highway-kilometres as a result of modal shift to active modes, will lead to a net decrease in greenhouse gas emissions. Based on the outputs of the AMAT, the monetised impact on greenhouse gases of modal shift from private car is estimated to be £13,036 (2010 PV).

Landscape and Townscape

3.7.5 The landscape along the route is characterised that of a relatively flat and open rural landscape with medium to large, rectilinear arable fields and smaller pastoral fields around settlement edges and along the River Cam. Scattered linear villages along local roads are screened by groups of trees, hedgerows, and shelterbelts. The scheme would have beneficial effects on the landscape pattern and

neutral effects on landcover, the tranquillity, and cultural elements of the landscape. A strategic focus on landscape enhancement through new planting could result in slight benefits. Overall, impacts will be neutral.

3.7.6 Construction activities are expected to temporarily impact local tranquillity, with the effects diminishing upon completion of the Proposed Scheme. There is an anticipation that traffic on local roads will decrease as vehicle users are encouraged along the Greenway, leading to increased movement and visibility in and around Horningsea. The implementation of mitigation measures, such as vegetated screening, would reduce such adverse impact.

3.7.7 The townscape is of low scale residential urban fringe with villages at Fen Ditton and Horningsea. The townscape character in Fen Ditton and Horningsea matters locally where the townscape is designated locally by Conservation Areas. The open character to the north matters regionally and is protected as Green Belt. The Proposed Scheme is anticipated to have a neutral effect on the layout, density and mix, scale, appearance, human interaction, culture, and land use of the townscape. Overall, the changes to the townscape due to the scheme are minor and do not impact wider townscape character, with minor changes for local visual amenity.

3.7.8 Overall, the summary assessment score is neutral.

Historic Environment

3.7.9 There are a number of designated heritage assets within a 50m study area of the Proposed Scheme, which include Fen Ditton Conservation Area, Horningsea Conservation Area, and Grade II* and II listed buildings.

3.7.10 Impact on the form of designated heritage assets will be neutral to slight positive and negative. There will be direct impacts on the Fen Ditton Conservation Area and Horningsea Conservation Area arising from new signage, traffic calming measures and resurfacing works. It is anticipated that there will be a slight negative impact. Neutral impact is anticipated on the significance of the Grade II listed buildings within Fen Ditton Conservation Area, though changes to the settings. The proposal to remove the highway between the Grade II listed War Memorial and the Church is anticipated to result in a slight positive impact. Neutral impact on the significance of Grade II* listed buildings in the Fen Ditton Conservation Area and the Grade II listed buildings within the Horningsea Conservation Area.

3.7.11 Impacts on the survival, condition, and complexity of the designated heritage assets, including listed buildings will be neutral.

3.7.12 Impacts to the context will be neutral to slight impact. There will be a change to the context of Fen Ditton Conservation Area and Horningsea Conservation Area likely to result in a slight adverse impact. Impacts on the period of the designated heritage assets is considered neutral.

3.7.13 The impact to non-designated heritage assets and buried heritage assets has not been determined at this stage. Overall, the summary assessment score is neutral to slight adverse / beneficial.

Biodiversity

3.7.14 Impacts on the Eversden and Wimpole Wood Special Area of Conservation (SAC), and on the barbastelle bats that use the woods and are the principal reason for its European designation, will be neutral. Impact Fenland SAC designated for Molinia meadows on calcareous, pesty or clayey-silt-laden soils and Cladium mariscus and species of the Caricion davalliane is considered as

neutral. There are five Local Nature Reserve (LNR) within 2km of the Proposed Scheme, consisting of grassland and scrub habitats with importance for birds and invertebrates. Impact to these LNR is considered neutral. Slight adverse impact is anticipated for the Ditton Meadows County Wildlife Site (CiWS), as a result of pollution risk from the Proposed Scheme.

3.7.15 There are many hedgerows within the Proposed Scheme, with the majority acting as boundaries rather than crossing the Scheme. Impact to these hedgerows are considered neutral. A badger survey has not been undertaken for the Proposed Scheme, and further surveys have been recommended to identify whether there are any Badgers within suitable sett building habitat. Therefore, slight impact to badgers is anticipated.

3.7.16 Overall, the summary assessment score is slight adverse.

Water Environment

3.7.17 Surface water and groundwater features are located with 500m of the Proposed Scheme. River Cam and tributaries is channelled within the study area and has been assessed as magnitude level of slight beneficial, as runoff quality may increase due to a modal shift to green modes of transport and overall is considered insignificant adverse impact.

3.7.18 The majority of the Proposed Scheme is in Flood Zone 1. A small area is within Flood Zone 2 and 3, but this are does not include any proposed works so unlikely to impact floodplain storage. There are numerous land drains and ditches in the area, flooding risk is considered as insignificant.

3.7.19 Anticipated impacts in specific areas include potential alterations to groundwater level and flow due to changes in groundwater recharge. Localised impacts resulting from scheme development activities, such as resurfacing, are deemed to be of slight adverse nature.

3.7.20 With standard mitigation, any risks of chemical contamination of ground or surface waterbodies is not considered to be significant and therefore overall, the summary assessment score is Neutral to slight adverse.

Summary

3.7.21 The table below summarises the environmental impacts of the scheme.

Table 3-15 – Summary of Environmental Impacts

Environmental Impact	Assessment, £
Noise	£328 (2010, PV)
Air Quality	£321 (2010, PV)
Greenhouse Gases	£13,036 (2010, PV)
Landscape	Neutral
Townscape	Neutral
Historic Environment	Slight Adverse
Biodiversity	Slight Adverse
Water Environment	Neutral to Slight Adverse

3.8 Social Impacts

3.8.1 The following sections summarise the social impacts of the Horningsea Greenway scheme.

3.8.2 Given the stage of business case development, the assessments are largely qualitative. Some social impacts are monetised using a quantitative assessment based on output from the AMAT tool.

Reliability

3.8.3 Through providing a continuous walking & cycling route from Horningsea to Fen Ditton, the Horningsea Greenway scheme will improve reliability for those travelling by active modes travelling along this corridor.

3.8.4 The impact of the scheme on reliability is estimated to be **Slight Beneficial.**

Physical activity

3.8.5 The improvement to active mode facilities will encourage more cycling and pedestrian travel. Increased usage of the cycle network will promote more physical activity. Greater levels of cycling will result in health benefits through reduced health problems including diabetes and high blood pressure. TAG uplift in physical activity is also likely to result in a reduction in absenteeism which will give rise to positive benefits for the user and businesses.

3.8.6 AMAT estimates the monetised impact of physical activity to be **£1,940,637** (2010 PV).

3.8.7 In addition, an increase in walking trips along the Horningsea Greenway route will result in further health benefits. These benefits have not been fully captured within the appraisal (i.e. health impacts as a result of the increase in pedestrians due to the provision of dedicated crossings and improved lighting).

Journey Quality

3.8.8 TAG Unit A4.1 sub-divides journey quality impacts into three groupings:

- traveller care (including cleanliness, level of facilities, information and the general transport environment)

- travellers' views (including the view and pleasantness of external surroundings in the duration of the journey)
- traveller stress (including frustration, fear of accidents and route uncertainty)

3.8.9 The improvements to the cycling and walking infrastructure along the route will improve the pleasantness of surroundings for users.

3.8.10 Based on the outputs of the AMAT tool, the monetised impact on journey quality is estimated to be **£77,198**.

Accidents

3.8.11 The scheme is anticipated to result in a reduction in traffic movements as people are encouraged to use active modes. Users of motorised modes who shift mode to active modes will result in fewer vehicles and an overall reduction in highway-kilometres travelled and the number of highway accidents.

3.8.12 Based on the outputs of the AMAT, the monetised impact on accidents is estimated to be **£6,112**.

Security

3.8.13 The improved lighting provision along the route will increase the perception of safety for pedestrians and cyclists. Lighting improvements such as solar studs will give a sense of security to users of the Greenway, particularly on off-road sections.

3.8.14 The impact of the scheme on security is estimated to be **Moderate Beneficial**.

Access to Services

3.8.15 The expansion, and improvement, of cycling and pedestrian infrastructure provided by the Horningsea Greenway scheme will improve accessibility between Horningsea and Cambridge. In addition, accessibility for both pedestrians and cyclists will be enhanced with respect to improvements in pavement evenness and level access.

3.8.16 The impact of the scheme on access to services is estimated to be **Slight Beneficial**.

Affordability

3.8.17 Affordability will increase for previous bus or car users as the cost of travel will decrease as they will no longer pay fares or fuel and non-fuel vehicle operating costs.

3.8.18 The impact of the scheme on affordability is estimated to be **Slight Beneficial**.

Severance

3.8.19 The introduction of the Horningsea Greenway will improve the cycle facility between Horningsea and Cambridge. The pathway is already in use, and it has been modified to adapt more with the user benefits. Improved crossing facilities and surface quality is expected to reduce the severance currently created due to the lack of facilities benefitting the active modes.

3.8.20 The impact of the scheme on severance is estimated to be **Slightly Beneficial**.

Option and Non-Use Values

3.8.21 The proposed scheme does not introduce new travel options and therefore the impact is considered to be **Neutral**.

Summary

3.8.22 The table below summaries the social impacts of the scheme.

Table 3-16 – Summary of Social Impacts

Social Impact	Assessment
Reliability	Slight Beneficial
Physical Activity	£1,940,637
Journey Quality	£77,198
Accidents	£6,112
Security	Moderate Beneficial
Access to Services	Slight Beneficial
Affordability	Slight Beneficial
Severance	Slight Beneficial
Option and Non-Use Values	Neutral

3.9 Distributional Analysis

3.9.1 Distributional Impacts (Dis) consider the variance of transport intervention impacts across different social groups. The analysis of Dis is a constituent of the AST. Both beneficial and/or adverse Dis of transport interventions need to be considered, along with the identification of social groups likely to be affected.

3.9.2 In terms of distributional analysis, the categories that need to be considered include user benefits, accidents, and affordability, together with the effects of the scheme on local noise and air quality. The effect of these impacts is assessed for the following social groups:

- Income distribution
- Children
- Young adults
- Older people
- Disabled
- Black and minority ethnic groups
- Those without access to a car
- Carers

3.9.3 Based on the proportionate approach set out in TAG Unit A4.2, the DI assessment for the active travel elements of the Horningsea Greenway scheme has identified the likelihood of impacts for each indicator. Where it is anticipated there will be impacts a qualitative commentary identifying the social groups most likely to be affected has been provided.

3.9.4 The findings from this DI assessment are set out in Table 3-17 below.

Table 3-17 – Distribution Impact Assessment

Indicator	Appraisal output criteria	Potential impact	Qualitative Comments	Assessment
User benefits	The TUBA user benefit analysis software or an equivalent process has been used in the appraisal; and/or the value of user benefits Transport Economic Efficiency (TEE) table is non-zero.	Yes, positive	AMAT has been used to appraise user benefits for the scheme. This analysis does not produce spatial distribution of the benefits, but an overall benefit.	User benefits for pedestrians and cyclists are forecasted to provide benefits for those who do not have access to a car (due to age, affordability and physical ability).
Noise	Any change in alignment of transport corridor or any links with significant changes (>25% or <-20%) in vehicle flow as an indicator of significant change.	Yes, positive	There are no significant changes (>25% or <-20%) in vehicle flow, speed, %HGV content expected as a result of the scheme.	No further assessment.
Air quality	Any change in alignment of transport corridor or any links with significant changes in vehicle flow, speed or % HGV content: ▪ Change in 24-hour AADT of 1000 vehicles or more ▪ Change in 24-hour AADT of HGV of 200 HGV vehicles or more ▪ Change in daily average speed of 10kph or more ▪ Change in peak hour speed of 20kph or more ▪ Change in road alignment of 5m or more	Yes, positive	There are no significant changes in vehicle flow, speed, %HGV content expected as a result of the scheme.	No further assessment.
Accidents	Any change in alignment of transport corridor (or road layout) that may have positive or negative safety impacts, or any links with significant changes in vehicle flow, speed, %HGV content or any significant change (>10%) in the number of pedestrians, cyclists or motorcyclists using road network.	Yes, positive	The scheme is expected to reduce the number of collisions that occur along the Greenway corridor as a result of the scheme proposals such as greater separation between active modes and vehicles. And improved crossing facilities for the active modes.	Through benefitting those who walk and cycle the scheme will benefit those who do not have access to a car, including due to age, affordability and physical ability.
Security	Any change in public transport waiting/ interchange facilities including pedestrian access expected to affect user perceptions of personal security.	Yes, positive	The installation of lighting suds along off-road sections of the route will improve the security of users along the corridor.	This may provide a particular benefit to socially vulnerable groups such as the disabled, elderly and ethnic minorities.

Indicator	Appraisal output criteria	Potential impact	Qualitative Comments	Assessment
Severance	Introduction or removal of barriers to pedestrian movement, either through changes to road crossing provision, or through introduction of new public transport or road corridors. Any areas with significant changes (>10%) in vehicle flow, speed, %HGV content.	Yes, positive	The introduction of new and improved crossing facilities along the greenway will reduce the severance currently created due to the lack of active mode benefitting upgrades.	This may provide a particular benefit to the economically disadvantaged along the greenway corridor who are most reliant on walking and cycling.
Accessibility	Changes in routings or timings of current public transport services, any changes to public transport provision, including routing, frequencies, waiting facilities (bus stops / rail stations) and rolling stock, or any indirect impacts on accessibility to services (e.g. demolition & re-location of a school).	Yes, positive	The expansion, and improvement, of existing cycling and pedestrian infrastructure along the route will improve accessibility between Horningsea and Cambridge. In addition, the improved paving infrastructure will improve accessibility for both pedestrians and cyclists in terms of pavement evenness and level access.	No further assessment.
Affordability	In cases where the following charges would occur; Parking charges (including where changes in the allocation of free or reduced fee spaces may occur); Car fuel and non-fuel operating costs (where, for example, rerouting or changes in journey speeds and congestion occur resulting in changes in costs); Road user charges (including discounts and exemptions for different groups of travellers); Public transport fare changes (where, for example premium fares are set on new or existing modes or where multi-modal discounted travel tickets become available due to new ticketing technologies); or Public transport concession availability (where, for example concession arrangements vary as a result of a move in service provision from bus to light rail or heavy rail, where such concession entitlement is not maintained by the local authority).	Yes, positive	The scheme will encourage modal shift to active modes, which may reduce the cost of travel for users	No further assessment.

3.10 Value for Money Assessment

3.10.1 The economic appraisal for the Horningsea Greenway scheme produces a BCR of 1.7:1, implying medium value for money. The main benefits are associated with increased physical activity as a result of users switching to active modes. Benefits associated with the scheme's journey quality improvement accrue the second most scheme benefits. Other scheme benefits include decongestion from fewer vehicles being on the highway network as a result of modal shift. Overall, the benefits amount to £2.82m (2010 PV). The cost of the scheme is £1.66m (2010 PV), which includes 20% optimism bias.

3.10.2 Sensitivity tests undertaken demonstrate that the scheme will deliver low value for money with the demand uplift reduced to 12.5% , producing a BCR of 1.2:1. If appraised over a 30-year period, the scheme has the potential to deliver high value for money (i.e., a BCR above 2). A scenario projecting an ambitious 75% demand uplift demonstrates that the scheme could offer very high value for money if this demand materialises, indicated by a BCR exceeding 3.

3.10.3 There are also other impacts not captured or monetised in the appraisal that positively impact on the case for the scheme, strengthening the value for money implied by the BCR. These include social benefits in terms of severance, security, affordability, and access to services.

3.10.4 This appraisal has considered the Horningsea Greenway as a standalone scheme. There are potential connectivity benefits encouraging additional demand arising from the network effects of integration with neighbouring planned schemes including the Bottisham Greenway and the Swaffhams Greenway and wider cycling schemes such as the Chisholm Trail. Hence there is a strategic fit with GCP's policy ambitions to promote sustainable modes and deliver mode shift from private vehicles in order to ensure the ongoing economic growth of the region.

4 Financial Case

4.1 Introduction

4.1.1 This chapter presents the Financial Case for the Horningsea Greenway scheme and demonstrates its initial affordability. It sets out the currently identified scheme costs and funding cover for the development and the implementation of the Horningsea Greenway.

4.2 Scheme Costs

4.2.1 Scheme costs and a cost profile for the Horningsea Greenway is provided in Table 4-1. The capital costs have been estimated by WSP and Milestone. The outturn cost estimate is based on the detailed design scheme drawings for the Horningsea Greenway and assumes the scheme to be completed and opened by the end of 2024. It should be recognised that any delay to the scheme opening is likely to result in an increase in costs from those presented.

4.2.2 Indirect construction costs include main contractor's preliminaries, traffic management, overheads, and profit. Indirect non-construction costs include Stats and professional fees.

4.2.3 It is estimated that the Horningsea Greenway will cost in the region of £2.67 m, as set out in Table 4-1. Inflation has not been factored in as the scheme's costs have been calculated based on 2024 prices, and the scheme is scheduled for completion and opening within the same year.

Table 4-1 – Horningsea Greenway Scheme Costs, £000s, 2024 Prices

Item	2024	Total
Direct Construction Costs	761	761
Indirect Construction Costs	1,019	1,019
Indirect Non-Construction Costs	356	356
Sub-total	**2,136**	**2,136**
Risk / Contingency	535	535
Scheme Total	**2,671**	**2,671**

4.2.4 The Horningsea Greenway scheme will incur maintenance costs. A Greenway Maintenance Guidance has been produced by the GCP. Currently, CCC and the GCP are assessing the costs of maintaining the Greenways network in coordination with the County Council's Highways team in order to apply for maintenance funding to accompany the development funding. This will provide the resources required by the maintenance teams to uphold the quality of the Horningsea Greenway. It is not expected that the maintenance costs will be excessive.

4.2.5 The Horningsea Greenway comprises existing road or path, with no new infrastructure to be created. Gritting, grass verge cutting, and hedge cutting are the only three treatments provided by Highways when maintaining paths. However, it is likely that the Horningsea Greenway will require

other interventions such as pothole filling, siding out, tree root damage and surface cracks filling, adding to the cost of maintaining the network.

4.3 Funding Cover

4.3.1 The development and implementation of the Horningsea Greenway is funded by the GCP through City Deal funding. The City Deal funding aims to enable the GCP to promote economic growth and development. However, the GCP is looking to secure an appropriate proportion of the costs from local developer contributions through the planning process. Third party funding will be reviewed for the Horningsea Greenway project. The GCP is also seeking opportunities to bid for other development funds such as the Transforming Cities Fund and National Highways designated funding to consolidate the GCP's overall programme budget.

5 Commercial Case

5.1 Introduction

5.1.1 This chapter presents the Commercial Case for the Horningsea Greenway scheme, describing the proposed procurement approach, risk allocation and contract management processes which are aligned with the overall approach for the Greenways programme. Specific details are provided for the Horningsea Greenway.

5.2 Procurement Approach

5.2.1 The Greenways Programme will be implemented using established Cambridgeshire County Council contracts, or Government Procurement Frameworks which will be used to procure external support for tasks including Design, Early Contactor Involvement and Communications (where not available internally).

5.2.2 For the Horningsea Greenway scheme WSP has been procured for the design role under the Joint Professional Services Framework (JPSF), as shown in Table 5-1. JFG Comms via WSP is supporting the communications activities, CBRE are acting as Land Agents, Pathfinder Legal are providing legal services, and Milestone (formerly Skanska) has been appointed as ECI contractor for the scheme. This appointment was made via Cambridgeshire County Council's Highways Framework Contract ECI during 2022 into main construction.

Table 5-1 – Programme Consultants and Contractors

Consultant	Role	Procurement Route
Atkins	Design, Business Case, Planning and main consultant for Waterbeach, St Ives, Sawston and Melbourn Greenways	Joint Professional Services Framework
WSP	Design, Business Case, Planning and main consultant for Comberton, Haslingfield, Barton, Fulbourn, Swaffhams, Horningsea and Bottisham Greenways	Joint Professional Services Framework
JFG Comms	Support the Communications activities required including day to day management of stakeholders and landowners	Joint Professional Services Framework via WSP
CBRE	Land Agents for the scheme, to value, negotiate and organise acquisition of land for the Greenways	Crown Commercial Services Framework
Pathfinder Legal	Legal support for land acquisition and any rights requirements	County Council Legal Services Agreement
Milestone	Early Contractor Involvement	CCC Highways Contract

5.2.3 GCP commissioned the consultants WSP and Atkins through its JPSF to prepare the Horningsea Greenway preliminary scheme designs, detailed scheme designs and provide business case support.

5.2.4 Milestone Infrastructure has successfully managed and carried out similar construction works in and around Cambridge, for example the Histon Road project. Milestone Infrastructure also committed to developing a major projects team to work on larger scale projects demonstrating Milestone's commitment to providing the necessary resources for the implementation of the Greenways network.

5.2.5 GCP is satisfied that Milestone continues to have:

- An appropriate recent history of carrying out highways / pavement works.
- A proven capability to administer and successfully complete works of similar value to the scheme.
- Site Management / Supervision capability with suitable experience of working adjacent to live carriageways and public interfaces.
- Health and Safety Management systems compliant with the type and locations for these works.
- The capability in resources either through direct labour force or subcontractor labour.
- An appropriate supply chain for the procurement of materials and plant to suit the Horningsea Greenway scheme requirements.

5.2.6 Early contractor involvement is incorporated with the traditional approach of separate contracts for the design and construction works for the scheme. This allows close control of the design process by the client, but also enables the delivery contractor to influence the design to reduce risks and cost by using their experience of the buildability and risks of designs.

Construction Procurement

Under the County Council's Highways Term Service Framework (TSF), the project has access to Milestone Infrastructure to deliver the main construction of the scheme. Milestone are well placed as they also deliver the maintenance of the highway network, are in close liaison with Street Works and have already competitively tendered to win the TSF. Milestone also have smaller teams able to do work that is relatively minimal, for example widening of existing footpaths in a more agile way than other frameworks or a full tender process would allow.

5.3 Payment Mechanism

5.3.1 The main payment option mechanism used for Milestone is the NEC contract Target cost Option C. GCP has Option A and Option E available, but Option C is the GCP's preferred option.

5.4 Risk Allocation

5.4.1 An overall risk register has been produced for the Greenways programme. A scheme specific management of risk has been undertaken using the Horningsea Greenway risk management plan / risk register. The risk register is detailed in the Management Case. Specific factors pertaining to the Horningsea Greenway scheme, included construction risks, the stage that the project is at in its development (detailed design) and importantly, the level of risk in the project and the appetite to accept or transfer it to the contractor were considered in making an informed decision on risk allocation. The approach ensured that the contractual arrangements for the delivery of the Horningsea Greenway scheme placed risk with the party best positioned to deal with these risks.

5.5 Contract Management

5.5.1 Management of the contracts for the design and delivery of the Horningsea Greenway scheme is undertaken by the Programme Manager, who is employed by GCP and has day to day responsibility for the delivery of the scheme.

6 Management Case

6.1 Introduction

6.1.1 The purpose of the Management Case is to demonstrate that robust arrangements are in place for the delivery, monitoring, and evaluation of the scheme.

6.1.2 Demonstrating that the scheme can be successfully delivered requires evidence of successful delivery of similar projects, evidencing that the scheme is being managed in accordance with best practice, and that the necessary arrangements are in place for change and contract management, benefits realisation, and risk management.

6.2 Evidence of Similar Projects

6.2.1 The GCP will deliver the Horningsea Greenway as part of the Greenways Programme using delegated powers from CCC, although in some areas such as Right of Way restrictions the GCP will rely on the County Council's statutory powers.

6.2.2 As a relatively new delivery body, the GCP has delivered a limited number of schemes within the current City Deal. However, the constituent members of the GCP have a long history of successfully delivering schemes both large and small in scale, to time and budget. Cambridgeshire County Council has successfully delivered large-scale public transport and active mode orientated transport projects in recent years, including those shown in Table 6-1.

Table 6-1 – Evidence of Similar Projects

Scheme Name	Objectives & Scope	Implementation
Chisholm Trail Phase 1 (c.£21m)	The 2.1km long Phase 1 of the Chisholm Trail is a walking and cycling route which aims to provide a mostly traffic-free route between Cambridge North and Cambridge stations and intermediate communities.	Phase 1 opened in December 2021, connecting Cambridge North to Coldham's Lane. Phase 1 of the trail is a joint project between the GCP and Cambridgeshire County Council.
Chisholm Trail Phase 2 (c.£21m)	The 1.4km long walking and cycling route connects to Phase 1 at Coldham's Common on Coldham's Lane, providing a link to Cambridge railway station and new housing developments alongside the railway line.	Ongoing
Babraham Road cycleway improvement works (£6m)	The 1.1km long 2.5m wide cycleway connects the Babraham Research Campus and Babraham with surrounding villages.	The cycleway was completed in December 2017 and delivered by Cambridgeshire County Council contractors.

Scheme Name	Objectives & Scope	Implementation
Fendon Road roundabout (£2.1m)	Fendon Road roundabout is the UK's first Dutch-style roundabout which is designed with an outer ring for cyclists, in a contrasting red surface, to give them equal priority with pedestrians over oncoming vehicles to provide a safer environment for cycling and pedestrians.	The scheme was opened in August 2020, and implemented by Cambridgeshire County Council and contractor, Milestone.
Fen Ditton and Stow-cum-Quy. (Five Cross City Cycling Schemes total of £8m)	Construction of a new foot/cycleway on Ditton Lane and Horningsea Road which is part of the Cross City Cycling schemes being funded by the GCP.	The scheme was delivered by the GCP.
Huntingdon Road Corridor (£1.7m)	Delivery of 2.2km of segregated cycle path, segregated by bespoke kerb or kerbed islands, five floating bus stops and side road priority	Delivered as part of the Cycle City Ambition Programme in 2016. With a combination of kerb protected lanes and raised lanes, levels of cycling rose by 20%[20]
Hills Road/ Addenbrooke's Corridor (c.£900k)	Delivery of advanced cycle lanes with better cyclist and pedestrian links to the Biomedical Campus.	Delivered as part of the City Deal Cross City Cycle Improvement scheme. Works commenced in late 2016, with completion of the full package of works in 2018.
Fulbourn/ Cherry Hinton Eastern Access Road (c.£650k)	A cycleway scheme involving raised segregated lanes and wide shared use paths along the arterial road into Cambridge.	This scheme was delivered as part of the City Deal Cross City Cycle Improvement scheme. Works commenced in late 2016, with completion of the full package of works in 2018.
Cherry Hinton High Street (c.£1m)	Widening and continuation of existing narrow cycle lanes, with improved junctions and pedestrian crossing facilities as part of a shared priority	Works delivered for Cambridgeshire County Council in 2016[21].

[20] Sustrans, 2019
[21] Phase 1 Improvements Plan, Cambridgeshire County Council, 2016

Scheme Name	Objectives & Scope	Implementation
	approach. Traffic calming measures also implemented.	
Trumpington Road (£0.9m)	Construction of 0.6km segregated unidirectional cycle lane into the city centre; including a bi-directional cycle lane on an existing raised bank and a floating bus stop.	Delivered as part of the Cycle City Ambition Programme[22].
The Cambridge Core Traffic Scheme (c.£7m[23])	This scheme delivered improved access for pedestrians, cyclists and public transport through traffic management and priority measures in the area bounded by the inner ring road. Delivery of this project demonstrates the ability of the promoters to think about the full impacts of a public transport scheme.	The measures were implemented in phases from 1997, promoting sustainable travel modes to improve the city centre environment. Between 1993 and 2003 the number of private vehicles in the city centre reduced by 15%. Public transport patronage on routes into Cambridge also increased.
Cambridgeshire Guided Busway (c.£150[24])	This busway was designed to provide a high-quality public transport connection between Huntingdon and St Ives, to the north west of Cambridge, and Addenbrooke's Hospital and Trumpington Park & Ride to the south of Cambridge.	The overall route is 42km long with 25km of that being guided busway and 17km of on-street provision including bus priority measures. Access to Cambridge City Centre is provided via on-street running. Construction began in July 2006 with the busway opened in August 2011. Although there were challenges during the delivery of the scheme, learning from this can benefit the delivery of future significant transport measures in the county.
Histon Road (c.£10.6m)[25]	The Histon Road project aims to provide better bus, walking and cycling facilities for those travelling on this busy key route	This scheme was completed in December 2022

[22] https://www.transportforqualityoflife.com/u/files/Cycle%20City%20Ambition%20Programme_Interim%20Report.pdf
[23] This is an estimate as the scheme was implemented over several phases since 1996 and includes a range of supporting measures
[24] Total cost of the Cambridgeshire Guided Busway including £109m contribution from Cambridgeshire County Council.
[25] https://www.greatercambridge.org.uk/transport/transport-projects/histon-road/histon-road-background

Scheme Name	Objectives & Scope	Implementation
	into Cambridge. This is to be achieved through: - A new bus lane from Blackhall Road to Carisbrooke Road, - New bus stop bypasses for cyclists - Improved cycle lanes - 2 new pedestrian crossings - Removal of on-street parking	

6.3 Complementary Schemes

6.3.1 The Greater Cambridge Greenways Programme forms part of the GCP's wider strategy to create better and greener transport networks. There are several planning and transport proposals which have varying degrees of synergy with the objectives of the Greenways project.

6.3.2 This section details planning and transport proposals across Greater Cambridge which offer potential complementarity with the Greenways Programme and hence with the Horningsea Greenway. Key complementary schemes include the planned Bottisham and Swaffham Greenways which will offer connectivity to the north-east and east of the scheme. Other complementary schemes are the Cross City Cycling and Cycling Plus schemes.

6.3.3 The complementary schemes identified in this section offer network opportunities to maximise the benefits to cyclists and pedestrians through an extensive and inter-connected system of routes.

Bottisham Greenway

6.3.4 Bottisham is located approximately 10km northeast of Cambridge across flat terrain and for cyclists it is currently served by shared-use paths adjacent to the A1303. In network terms, the Bottisham Greenway will connect with the Horningsea Greenway at Fen Ditton via the bow-tie arrangement, before continuing towards Cambridge via the Chisholm Trail. Parts of the existing National Cycle Network in Fen Ditton (Wadloes Path) have been widened as part of a 'quick win' scheme.

6.3.5 'Quick win' schemes are small-scale projects located within highways boundaries, and as a result can be delivered quickly. As a 'quick win', the GCP has recently widened and resurfaced the path near the A1303 to make it easier for walkers, cyclists, and horse riders to travel from Bottisham into Cambridge.

Swaffham Greenway

6.3.6 The villages of Swaffham Bulbeck and Swaffham Prior are approximately 13km and 15km from Cambridge respectively. Both villages at to the northeast of Cambridge across flat terrain and for cyclists they are currently served by shared-use paths adjacent to the B1102. The Swaffhams Greenway route links the villages to Stow-cum-Quy, where it converges with the Bottisham

Greenway, continuing along to Fen Ditton, where the Bottisham Greenway connects with the Horningsea Greenway.

6.3.7 The Swaffham route will provide a safer crossing point at Quy Road near Anglesey Abbey as well as links to the Chisholm Trail via the Bottisham Greenway which leads to Cambridge North and Central stations.

Chisholm Trail

6.3.8 The Chisholm Trail is a mostly off-road walking and cycling route under construction in Cambridge. Once completed, the full trail will run over 26 kilometres, linking Addenbrooke's Hospital and the Biomedical Campus in the south to Cambridge North railway station and the business and science parks. Phase 1 of the Chisholm Trail between Coldham's Common and Cambridge North railway station is 2.1km in length and opened in December 2021. The route also connects with the Guided Busway and the national Cycle Network, and green spaces in Cambridge including: Coldham's Common, the Leper Chapel Meadows and Barnwell Lake area, Ditton Meadows and Stourbridge Common.

6.3.9 Phase 2 is currently underway, however it requires access to land owned by Network Rail and other private owners in order for the trail to be completed. Phase 2 of the Chisholm Trail includes links to the Melbourn Greenway and the Fulbourn Greenway.

6.3.10 As part of the Greenways network, the Horningsea Greenway will benefit from the additional connectivity offered by the Chisholm Trail improving accessibility to a range of destinations in the city.

Cross City Cycling Project

6.3.11 In January 2015, the Executive Board agreed that the Cross City Cycling projects should form part of the City Deal programme. The Cross City Cycling projects are a network of five cycling routes linking residents to workplaces and other centres of activity. These projects are as follows:

- Arbury Road
- Cambridge North Railway Station and Science Park
- Ditton Lane & Links to East Cambridge
- Hills Road and Cambridge Biomedical Campus
- Fulbourn/Cherry Hinton Eastern Access

6.3.12 The GCP has worked with partners in the County Council and contractors to deliver these projects which aim to reduce congestion and encourage cycling as a healthier mode of transport. These projects located on radial routes in residential areas improved connectivity with the city centre and are complementary to the Greenways network connecting the city with the surrounding rural villages.

Cycling Plus

6.3.13 Cycling Plus is part of the GCP's investment in the active travel network. The GCP is already investing more than £115m in the active travel network and now through Cycling Plus they are looking to add to this, with up to £20m targeted at some of the key remaining gaps in the network.

6.3.14 GCP identified 13 corridors that could help join up the city's cycling network and selected two for investment following a public consultation in 2021. Hills Road is the first of these schemes to be consulted on. The proposals present two options for development to improve cycling and walking on

the busy road connecting the city centre to Cambridge Station and Cambridge Biomedical Campus. The proposed improvements aim to make walking and cycling safer, easier, more attractive and more inclusive for all street users.

6.3.15 The proposed improvements are complementary to the Greenways including the Horningsea Greenway, improving local connectivity and better connecting the city centre's active travel network.

Cambridge South West Travel Hub

6.3.16 The Cambridge South West Travel Hub forms part of the wider sustainable transport network across the city of Cambridge. It will intercept thousands of motorists who drive into the city and employment sites from the M11 and A10. The M11 Junction 11 is a vital access point into Cambridge from the south. Currently, Travel Hub provision is located on the city-side of this junction, the Trumpington Travel Hub site. A new Travel Hub site at Junction 11 in addition to the existing site would enable journeys to be faster and more reliable, reducing the increasing number of cars travelling into Cambridge.

6.3.17 The Travel Hub will have up to 2,150 car parking spaces, with 108 blue badge spaces and 108 electric vehicle charging bays, and 326 cycle spaces to encourage more people to get out their cars and cycle, walk, or use public transport. It will also have 12 parking spaces for coaches and an off-road public transport link between the hub and the A10 Hauxton Road/Addenbrooke's Road junction.

6.3.18 Plans for the Travel Hub were provisionally approved in July 2022. Further detailed design work will now be carried out and construction is expected to begin in 2024.

6.4 Governance, Organisational Structures and Roles

6.4.1 This section describes the programme governance and roles of the entities which applies to the Horningsea Greenway as part of the overall Greenways Programme. The overall structure is shown in Figure 6-1.

Executive Board

6.4.2 The delivery of the Project has five key stage decisions / approvals taken by the Executive Board, as follows:

- Decision to proceed with the development of the Project;
- Consideration of options and approval to consult on initial options;
- Selection of a preferred option following consultation and agreement to take forward preliminary design.
- Approval of preliminary design and Outline Business Case with agreement to enter relevant statutory processes and the preparation of a Full Business Case; and
- Final approval to implement the project and complete a Detailed Design.

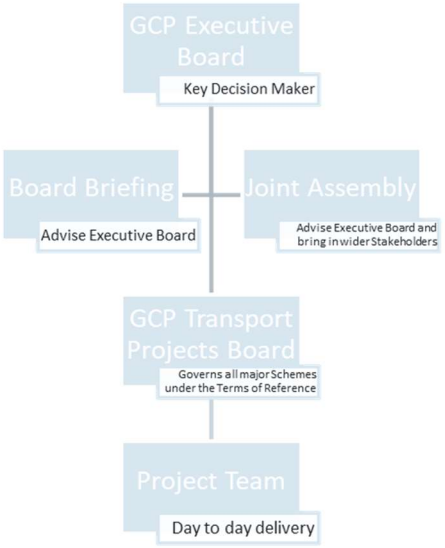
Transport Programme Board

6.4.3 The Transport Programme Board is the regular decision-making body for the Greenways. It takes decisions by exception on matters raised by the Senior Project Managers. The Transport Programme Board is held on a monthly basis with Highlight Reports provided one week in advance of the meetings. It is the responsibility of the Senior Project Managers to attend the Board and ensure they are provided with any issues which are in exception.

6.4.4 A project is in exception if:

- The project will not deliver the objectives agreed with the Executive Board
- The forecast overall cost of the project exceeds that which has been reported to the Executive Board
- The forecast completion of the project exceeds the date reported to the Executive Board
- A key decision milestone is forecast to be missed by 3 months (in line with the Executive Board cycle of meetings).
- A project is at risk of causing significant reputational damage to GCP or its partners

Figure 6-1 - Overall Greenways Programme Governance Structure



Cycling Projects Meeting

6.4.5 The Cycling Projects Meeting is primarily a coordination meeting between the different Active Travel projects. It includes:

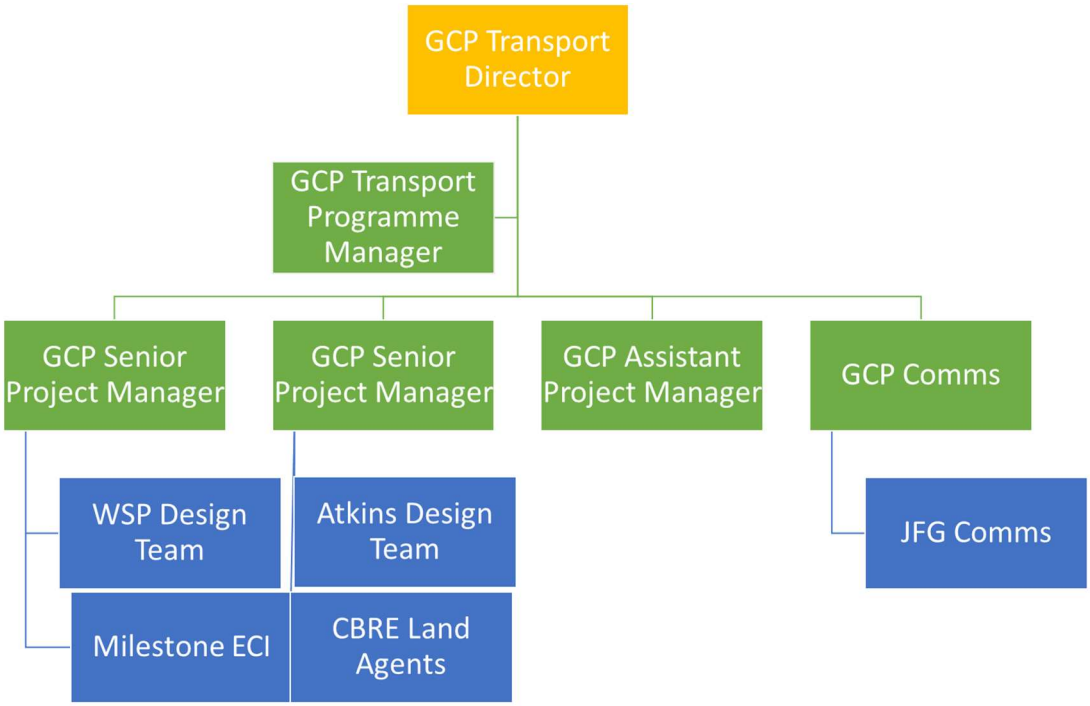
- Construction Programming, including prioritisation of routes (before ultimate sign off by Transport Programme Board)
- Decisions on design options (unless controversial at which point they will be escalated)
- Initial review of documents including the overall Business Case for the Greenways and design principles (before going on to appropriate decision-making bodies such as the Transport Programme Board)
- Decisions on timing of communications with the public and stakeholders
- At all times, projects should adhere to the GCP Assurance Framework26.

Resources

6.4.6 The Greenways is a complex programme of works. The following section sets out how the scheme will be managed. Figure 6-2 sets out the structure of the team.

[26] Governance Assurance Framework, GCP, 2022

Figure 6-2 - Structure of the Greenways Management Team



6.4.7 The roles and responsibilities of each of the management team is detailed below.

Internal GCP Resources

6.4.8 The internal GCP resources are set out below.

GCP Transport Director

- Overall accountable for the project, responsible for the structure of the project team and owns the Business Case
- Monitor & control the project tolerance at a strategic level.
- Make decisions on escalated issues.
- Reports to Executive Board on project progress, issues, approvals etc.

GCP Transport Programme Manager

- Responsible for monitoring and reporting on the programme budget to Transport Programme Board (TPB)
- Responsible for ensuring that Project Managers are adhering to the Assurance Framework
- Overall responsibility for producing the Procurement Strategy (i.e., Working with Project Managers to ensure the appropriate options are available)
- Monitors the progress of the programme against agreed key milestones (aligned to the reporting cycle for GCP)
- Resolution of day-to-day issues (specific to Greenways Programme only)
- Escalates significant issues to GCP Transport Director
- Sign off of all key contract documentation where commercially sensitive (specific to Greenways Programme only)

GCP Senior Project Managers

6.4.9 The Senior Project Manager runs the programme on a day-to-day basis in accordance with this document. The main responsibilities of the Project Manager are to:

- Be the face of the project, representing GCP at main stakeholder events to provide updates on the projects;
- Be responsible for the relationship with key stakeholders including County, District and Parish Councils as well as bodies such as National Highways and Network Rail;
- Deliver the project to a required specification and quality within budget and according to plan
- Direct and motivate project support resources;
- Project manage and plan all stages of the project;
- Prepare project, stage and exception plans;
- Prepare all required documentation for Project Management including risk logs, finance documents and the programme;
- Manage project risks (includes contingency planning);
- Monitor progress, expenditure, and resources, initiating corrective action as required;
- Keep the Transport Programme Board informed of deviations in plans and seek endorsement for associated action;
- Prepare stage reports for the Joint Assembly and Executive Board;
- Identify, commission and oversee external resources necessary for the assessment, evaluation, design, management and planning of the project;
- Be responsible for project administration;
- Ensure that the correct and appropriate Monitoring and Evaluation takes place for the project to ensure that it meets the requirements of the City Deal/ Gateway review;
- Facilitate a post construction review of the project; and
- Ensure that all new highway assets created/network amended is recorded. This includes the legal category of any new highway e.g., cycle track, together with details of extent, boundaries, and infrastructure.

GCP Assistant Project Manager

- Organise Project meetings and taking of minutes as appropriate;
- Coordinate communications with stakeholders when required;
- Update finance, programme and risk registers etc. as required;
- Provide support to Senior Project and Programme Manager when required.

GCP Communications Team

- Responsible for producing the overall Communications Plan for the Greenways Programme
- Responsibility for stakeholder management that is not specific to design, i.e., Councillors and Parishes
- Responsible for coordinating responses to enquiries (this is partly delegated to JFG Comms)
- Ensure the overall story of the Greenways is understood and communicated positively
- Produce regular updates for the public and key stakeholders.

Consultant and Contractor Support

6.4.10 External support resources are procured through established County Council contracts or Government Procurement Frameworks for various tasks including Design, Early Contactor Involvement, Communications (where not available internally). The Horningsea Greenway scheme

consultants and contractors have been procured, namely Atkins and WSP, as shown in Table 6-2. Milestone is contractor responsible for construction under the Cambridge County Council Highways Contract.

Table 6-2 – Procured Consultants and Contractors

Consultant	Role	Procurement Route
WSP	Design, Business Case, Planning and main consultant for Horningsea Greenway	Joint Professional Services Framework
JFG Comms	Support the Communications activities required including day to day management of stakeholders and landowners	Joint Professional Services Framework via WSP
Milestone	Early Contractor Involvement / Contractor	CCC Highways Contract

Atkins and WSP

6.4.11 Atkins and WSP were appointed to deliver the following aspects of the Greenways programme:

- Concept and Preliminary Design
- Transport modelling (as required)
- Transport assessment (as required)
- Environmental Impact Assessment and other relevant surveys and assessments (as required)
- Initial Cost estimating
- CDM Principal Designer
- Preparation of a proportionate TAG compliant Outline Business Case and Full Business Case
- Preparation of Planning Application, submission, and determination support (as required)
- Wayfinding Strategy (Atkins only)
- Land referencing (WSP only)
- Engagement event materials

6.4.12 Atkins and WSP were also procured for:

- Detailed Design
- Full Business Case
- Procurement support
- Construction Supervision

Milestone

6.4.13 Milestone was appointed for Early Contractor Involvement for the Greenways Programme. This work consists of:

- Producing budget estimates for the GCP schemes / projects
- Managing and co-ordinating the GCP programme of works, including co-ordination with highways contract to achieve efficiencies where possible linking planned GCP and CCC schemes / projects
- Producing and reviewing risk and opportunity registers for the schemes / projects
- Design maturity and buildability assessments
- Value engineering opportunities
- Review of utility diversions
- Assist where required for land take assessments, with particular focus on temporary land take requirements for construction period
- Construction programme development
- Planning and execution of design surveys including but not limited to; Ground Penetrating Radar ("GPR"), trial holes, ground investigation, TOPO and drainage surveys
- Developing traffic management solutions and co-ordinating with the CCC Streetworks team to confirm road space availability

6.4.14 Subject to performance and capacity this Milestone is the constructor for the Greenways projects.

CBRE and Pathfinder Legal

6.4.15 CBRE have been appointed as the land agents responsible for the Greenways Programme. They are procured to:

- Complete land acquisition strategies for each Greenway
- Complete land valuation for each Greenway
- Advise on the process of CPO as required
- Negotiate land on behalf of the GCP

6.4.16 They are supported by Pathfinder Legal who are responsible for

- Preparation of CPO documentation as required
- Legal advice on the process for CPO
- Completion of acquisition paperwork
- Advice on legal process to designate, or change designation of PRoWs

6.5 Project Assurance, Approval Plan and Programme

Programme Assurance

6.5.1 Responsibility for assuring the delivery of the project rests with the GCP Transport Programme Board and Cycling Projects Meeting and includes:

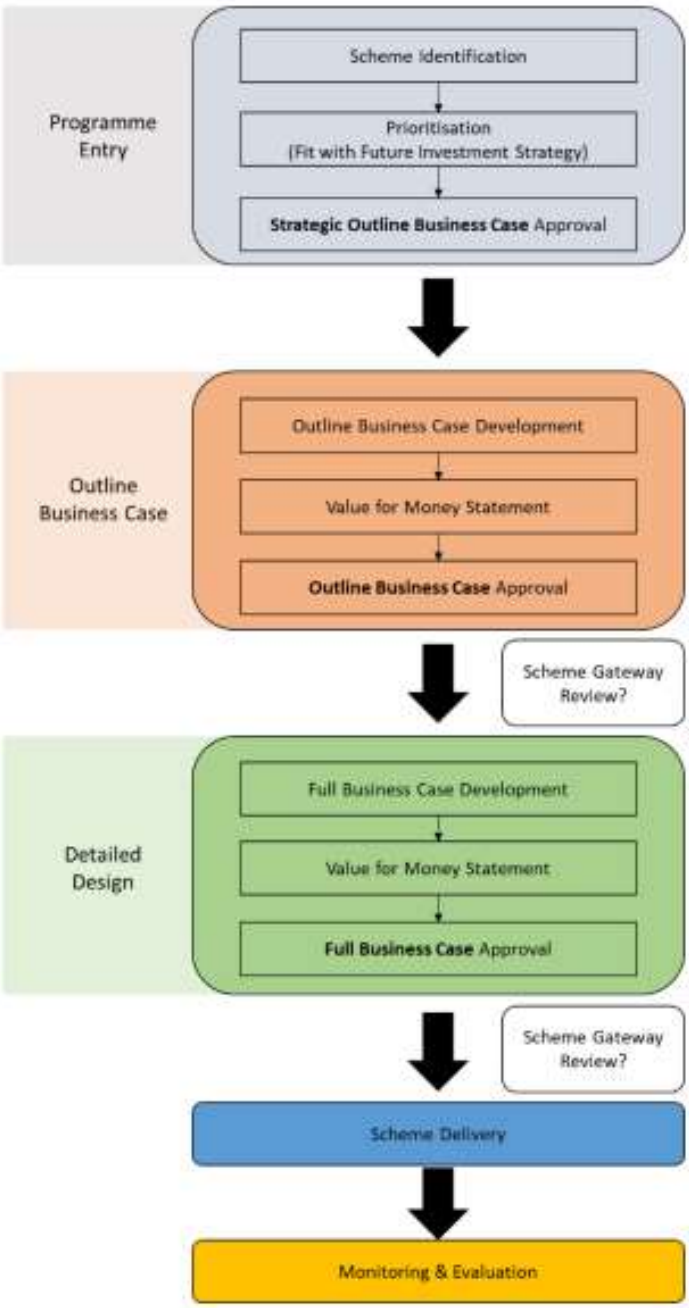
- Ensuring good liaison and collaboration throughout the project to achieve good governance
- Assuring that user needs and expectations are met or managed
- Ensuring that risks are being controlled
- Monitoring project expenditure versus benefits
- Informing the project of any changes caused by external events
- Ensuring adherence to relevant procedures, standards and specifications; and
- Ensuring highway aspects designed in accordance with Manual for Streets 2 and the Design Manual for Roads and Bridges, LTN1/20, as appropriate

GCP Work Stages

6.5.2 The programme for the overall Greenways project is aligned with the GCP work stages process set out in the GCP Local Assurance Framework (LAF). This LAF sets out, “membership, responsibilities, and principles that are in place for agreeing and overseeing investments to deliver the overarching City Deal objectives”. The LAF process is shown in Figure 6-3 commencing with programme entry through to full business case development. The Horningsea Greenway scheme business case, as with the other individual schemes, has been developed as an addendum to the Programme Outline Case.

6.5.3 The Framework ensures compliance with DfT’s minimum requirements for Assurance Frameworks.

Figure 6-3 - GCP Indicative Process for Business Case Development



Source: Greater Cambridge City Deal Assurance Framework

Approvals to Date

6.5.4 The programme entry work stage was completed with the development of the Greenways Programme Business Case and approval by the Executive Board. The Horningsea Greenway has progressed through the approvals process and detailed design has been completed and the Full Business Case produced. The Horningsea scheme is now moving forward to delivery with construction under way and programmed for completion by the end of 2024.

High Level Programme

6.5.5 This section provides an overview of the staged process through which the overall Greenways project will be delivered.

6.5.6 The high-level programme for the delivery of the Greenways is based on an approximately four-year programme. The Project will consist of stages in line with the Major Infrastructure Project Delivery Stage, Key Decision Matrix and GCP Assurance Framework. This is shown in Table 6-2**Error! Reference source not found.**. This has been slightly adapted to allow for an additional stage for sign-off for the first versions of technical design.

6.5.7 Individual greenway scheme's outline business case development takes place in Delivery Stage 2a Approved Option and Delivery in Stage 3 Preliminary Design. The final business case takes place in Stage 4 with completion of detailed design. Stage 5 is construction of the Greenway scheme.

6.5.8 The Horningsea Greenway has progressed through the Delivery Stage 4 Detailed Design and is moving forward to Delivery Stage 5 Construction.

Table 6-2 – Greenways Programme Project Stages

Stage	Description	Approval
Strategy Stage 0: Policy and Strategy	Preparation of Project Initiation Document (PID)	Complete
Delivery Stage 1: Project Set Up / Initial Options	Project resource planning, development of stakeholder engagement strategy and preparation of project development briefs	Complete
Delivery Stage 2: Feasibility Study	Identification of options, conceptual design work, strategic business case and assessments to facilitate initial stakeholder engagement to allow selection of a Preferred Option	GCP Executive Board
Delivery Stage 2a: Approved option	Feasibility Design of Preferred Option	GCP Transport Programme Board
Delivery Stage 3: Preliminary Design	Preliminary Design of Preferred Option and agreement of Outline Business Case	GCP Executive Board
Delivery Stage 4: Detailed Design	Final business case and detailed design to facilitate project approval Processes for planning permission, traffic regulation orders, compulsory purchase orders and Government statutory approvals as required	GCP Executive Board

Delivery Stage 5: Construction (Mobilisation and Construction)	Procurement of a provider(s) to construct the project Construction of the project Post-project review to assess how well the project objectives and outputs have been met	GCP Executive Board

Horningsea Greenway Outline Delivery Plan

6.5.9 The technical detailed design for the Horningsea Greenway route has now been completed. Given design maturity this has given greater clarity on what the key delivery risks and opportunities are. This has enabled the project team to develop an accurate programme for the construction programme. The Outline Delivery Plan for the Horningsea Greenway is shown in Table 6-3 setting out milestones and scheduled dates for completion.

6.5.10 On 4 January 2024, the Executive Board was recommended to approve the Greenways Programme Full Business Case. Executive Board decisions were taken in late 2022 and 2023 to progress to the Full Business Case and Detailed Design stage for all Greenways, which included the Horningsea Greenway

6.5.11 Horningsea Greenway's current stage is construction, with the programme completion date being confirmed for 2024.

Table 6-3 – Horningsea Greenway Outline Delivery Plan 2022-2024

Year	Delivery Plan
2022	▪ Development of preliminary designs ▪ Public Engagement and preceding Stakeholder Engagement completed – autumn 2022 ▪ Topographical Surveys ▪ Environmental Surveys ▪ Planning and Consents Strategies ▪ Traffic Surveys ▪ Land Owner Discussions
2023	▪ Land Owner Negotiations ▪ Public consultation in Autumn 2022 ▪ Development of wayfinding strategy /lighting strategy across all Greenways ▪ Detailed design and technical approvals ▪ Planning Applications ▪ Traffic Regulation Orders (TRO) ▪ Compulsory Purchase Orders (CPO) / PRoW orders ▪ Early Physical Works: - Fen Ditton Primary School to Horningsea Village - Horningsea Road to Fen Ditton Road - Horningsea Village
2024	▪ Full Business Case completion – April 2024

	▪ Construction to be completed of all remaining sections of the Horningsea Greenway – June 2024

6.6 Stakeholder Engagement and Communications

6.6.1 This section sets out the strategy for project communications and stakeholder management. The consultation strategy of the Horningsea Greenway scheme development was designed by the GCP communications team with input from Cambridgeshire County Council's Research Team. The strategy involved the identification of the audience, the design of consultation materials and design, and analysis of the consultation results.

6.6.2 Effective communication is critical for the success of the Horningsea Greenway project. The key priorities for communications during the development of the design of the project were to:

- Provide all relevant stakeholders with clear, well-structured details of the GCP vision, project objectives and possible options, as well as being clear about what this project does and does not cover
- Create opportunities for stakeholders to express their opinions and encourage the opportunity to share their views on the options freely and openly
- Use an appropriate methodology for collecting stakeholder responses and analyse them
- Build upon the feedback received during the public consultation period
- Create a consistent message to convey that the Horningsea Greenway is part of the greenways programme to ensure stakeholders are aware that the Horningsea Greenway is not only part of the Greenways Programme, but also a part of a wider vision set forward by the GCP
- Ensure the benefits and impacts of the scheme are clearly presented to all stakeholders
- Identify advocates for the scheme
- Manage any reputational risks associated with the scheme
- Raise the profile of the GCP and its work
- Ensure all engagement and communication is recorded and reported where necessary

6.6.3 The Horningsea Greenway proceeded with development of the agreed alignments and initial design work. It involved environmental surveys, key structure design, more detailed costing, and land negotiation. Initial stakeholder engagement involved discussions with residents and stakeholders to understand and incorporate needs and concerns within principal design standards across all routes. The initial consultation event in 2019 was met with a positive response with most respondents in favour of the majority of the elements of the proposed Horningsea Greenway with the exception of element 2 'Fen Ditton Church Road arm closure with landscaping around the churchyard entrance' which was supported by less than half of respondents and opposed by over a fifth. Accordingly, this information was then used in the design for the initial proposals for the Horningsea Greenway scheme.

6.6.4 Responses from the 2019 public consultation shaped the proposals that were presented in the four-week engagement period that ran between 21 November 2022 and 16 December 2022. The consultation resulted in proposals for consideration in the development of the scheme design which included enforcement through physical measures of speed limits. A 20mph speed limit in Fen Ditton was proposed, and an additional crossing over Baits Bite Lock was proposed as an opportunity to provide an east-west connection.

6.6.5 Engagement included a range of key stakeholders along the Horningsea Greenway corridor who continued to be engaged as the project progressed. These included partner authorities, council members, parish councils, representatives of walking, cycling and equestrian groups, and owners of land where access agreements were needed to operate or construct the scheme.

6.6.6 The Horningsea Engagement Summary Report (HESR), published in January 2023, reflected mixed feedback from communities on the Greenway Scheme. Suggestions included narrowing the carriageway, implementing speed limits, and installing lighting. The engagement approach included both in-person and online activities, with 84 survey replies, two letters, and six emails. The primary issues ranged from road quality to retaining village characteristics among urban expansion.

Scheme Communications Plan

6.6.7 In addition to the strategic programme-wide communication messages and objectives set out above, an individual route engagement and communications plan was developed and implemented for the Horningsea Greenway.

6.6.8 There are two key channels for proactive communications that the GCP used to tell the story of the Horningsea Greenway as it was developed in the context of the Greenways Programme:

- The Website – The Greater Cambridge Partnership website is the key communications platform where information regarding the Greenways project is provided
- Quarterly GovDelivery Updates – Communication updates are issued quarterly to outline the progress made on the Greenways project

Designed by the GCP communications team with input from the County Council's research team, project communication is governed through the Communications Plan, as outlined below. The purpose of the strategy is to ensure that accurate and timely messages about the scheme are disseminated to a range of identified stakeholder groups. Table 6-4 sets out the communication methods.

Table 6-4 – Communications Method for the Horningsea Greenway

Audience	Type of Communication	Frequency	Responsibility
General Public	Formal consultation – online survey and paper return survey Regular website updates provided on GCP Greenways webpages (i.e., Greenway specific updates and preliminary design) GovDelivery Updates	Initial Horningsea consultation autumn 2019 Horningsea engagement autumn 2022 Quarterly	GCP Communications Team

Other Key Stakeholders	Meetings Emails	As Required	Project Manager
Members	Reports Briefing Sessions	As per Scheme Updates / Progress	Project Manager
Technical Officers **CCC / GCP**	Project Team Meetings	As Required	Project Manager
General Correspondence	Letters, Emails, GCP social media	As Required	Project Manager / Communications Team

6.7 Risk and issues Management

6.7.1 The Horningsea Greenways scheme risk management is documented in the Issues and Risks Log produced by WSP.

6.7.2 Key Risks for the Greenways Programme as a whole, are as follows:

- Resourcing – staffing of the project team and the Communications team
- Procurement process – the risk of time and cost extensions to procurement
- Consents – obtaining planning consents, and Network Rail and Highways England approvals
- Acquisition of land - potential delays in obtaining land access consents with possible associated delays to the completion of the elements of the preliminary design
- Cost escalation – effectiveness of project controls to manage costs
- Environmental impacts affecting the route of the scheme
- Other infrastructure schemes/developments taking precedence over the Greenway
- Anticipated key stage Executive Board approvals being granted.

6.7.3 Mitigation measures identified include the following:

- The Issues and Risks Log for the overall Greenways programme forms the basis for developing the individual Risk Issues and Logs for each of the Greenways schemes
- An overarching Stakeholder Engagement & Comms Plan and Tracker produced to plan and log all engagement across the Greenways project including undertaking re-engagement and wider stakeholder engagement. The GCP Comms team issue quarterly progress and communications updates via its website and Gov-delivery.
- Costings for the scheme to be reviewed by designers at every design stage
- Development of a land access strategy / prioritising land acquisition critical to the scheme development.
- Identification of alternative routes to minimise environmental impacts

6.7.4 A risk register was produced for the Horningsea Greenway scheme for the detailed design and construction stage of scheme development. Risk mitigation was assessed from a strategic perspective and was reviewed monthly.

6.7.5 The key scheme risks identified at OBC and still applicable at FBC are as follows:

- **Programme acceleration –** Quick Win schemes, as well as some sections progressing ahead of others resulted in a lack of correct resources, thus increasing the costs. The programme acceleration resulted in construction programme delay as a result fo the following:
  - WSP TRO resourcing issues due to specialists leaving the business
  - GCP/CCC lack of resources that delayed the RSA2
- **Substandard Pavement Depths –** No Coring survey was proposed. This risk still applies at Full Business Case stage and may have reputational cost implications, an impact on safety, as well as traffic disruption.
- **Existing Trees –** There is risk of damage to existing trees, including trees located within private gardens which could have a negative impact on the environment. This risk would only affect the Bow-tie section.
- **Costs –** If there is construction cost overrun attributable to programme acceleration there is risk of delay to the project
- **Ground Contamination –** Potential presence of ground contamination will result in additional construction costs.
- **Drainage -** Unforeseen works to existing drainage and/or lengthily negotiations with drainage authority for new connections will result in programme delays and additional construction costs as no drainage information was available.
- **Buildability –** The scope of works may increase during the construction phase leading to delays, compensation events and re-design. The risk has been kept to a minimum due to contractor involvement/liaison, however, is not eliminated.
- **Service Upgrade Works** – Utilities company disturbing the completed works and failing to reinstate to the desired standard, resulting in programme delay and extensive public disruption through uncoordinated programme.

6.7.6 Risks identified with respect to the construction stage are as follows:

- **Private driveways/ businesses** being inaccessible during the scheme's construction
- Risk or injury to users of Greenways owing to **potential conflict between cyclists/pedestrians** during operation (i.e. on completion of works)
- Risk of injury to Greenway users owing to **defects developing in surfacing**
- **Injury to trespassers** from onsite construction works, equipment and excavated areas
- **Conflict between construction work and public**
- **Pedestrian / user access and circulation** to take into account slopes for risk of slips, trips and falls
- **Temporary road closure** in order to construct the Build out safely and to avoid conflict with live traffic and pedestrians
- **Temporary road closure** would have to be provided In order to construct the raised table extension safely and to avoid conflict with live traffic and pedestrians
- In order to construct the block paving resurfacing the western arm of the Church Street-High Street junction at Fen Ditton safely and to avoid conflict with live traffic - temporary road closure would have to be provided

- **Access to St. Mary the Virgin Church in Fen Ditton** may be impeded throughout the construction of the resurfacing
- **Change in priority** on the proposed parallel crossing

6.7.7 Mitigation measures were identified are as follows:

- **Programme acceleration – a** robust programme is in place.
- **Substandard Pavement Depths –** Carry out a Visual Survey and consider solutions to optimise the structural and functional performance of the existing pavement. Further investigation to be carried out during construction to resolve specific soft spots.
- **Existing Trees –** Arboriculture survey to be undertaken and residual risks to be shown on drawings. Tree removal will include stump gridding. Proposed levels to be higher than existing or the same
- **Costs –** Cost Estimates to be carried out at key milestones or if the scheme changes (WSP/ GPC). Early contractor involvement undertaken to obtain cost estimates. To monitor cost during construction to ensure cost do not exceed budget and implement required corrective measures if required.
- **Ground Contamination –** to carry out ground investigation
- **Drainage -** Early consultation with the drainage authority. Eliminate requirement for new connections application by re-utilising existing drainage The design of SuDS is based on infiltration to achieve its benefits, but it does not rely on infiltration (overflow system / perforated pipe provided)
- **Buildability –** Ensure risk allowance/contingency is calculated and regularly reviewed as scheme goes forward to construction. To undertake extensive SU surveys and investigations following the NRSWA process including GPR, trial holes, and extensive investigations (throughout the affected site length with particular attention to impacts from proposed tree removal and replacement). ECI to build scheme scope knowledge and understanding.
- **Service Upgrade Works** – Work with SU to programme any required works, ensure that all communications with SU's are logged. Early liaison / coordination with utility companies to identify and reschedule programmed works.
- **Access to driveways/ businesses** to be provided at all times if is required. Suitable pedestrian routes to be provided to minimise potential for conflict between workforce, site visitors and plant movements. Early liaison with residents, businesses and all affected parties required in order to discuss phases of the works and access requirements.
- **Monitor and evaluate** success through post completion RSA
- **Materials as per HERCS 2023**
- **Principal Contractor to provide suitable fencing and protection** to the works site at all times
- **Contractor to monitor barriers** are in place once works commence and follow construction and storage plans. Contractor to keep working areas tidy to reduce H&S hazards
- **Gradients** checked during detail design and it has been ensured that grading does not exceed 1:12
- **Temporary Traffic Order Regulation** (TTRO) to be applied for road closure, notably to the construction of the build-out, raised table extension, and the block paving resurfacing the western arm of the Chrch Street – High Street junction at Fen Ditton.
- **Minimise potential for conflict between workforce, site visitors and plant movements**. Early liaison with Church, residents, businesses and all affected parties required in order to discuss phases of the works and access requirements

- **Temporary signage added**

6.8 Monitoring and Evaluation

6.8.1 On completion of the construction of the Horningsea Greenway, a review of the delivery process will be undertaken in accordance with the Greater Cambridge City Deal Project Review Protocol.

6.8.2 The Project Manager will facilitate the review to produce a review report for consideration by the Project Board, ahead of scrutiny by the Joint Assembly and sign off by the Executive Board.

6.8.3 A monitoring and evaluation plan and a benefits realisation plan have been produced for the Horningsea Greenway scheme.

6.8.4 The DfT's 'Monitoring and Evaluation Framework for Local Authority Major Schemes' guidance document forms the basis of the monitoring strategy alongside the GCP's Assurance Framework.

6.8.5 The DfT guidance sets out the requirements for the monitoring of schemes and outlines three tiers of monitoring and evaluation, these are:

- Standard monitoring;
- Enhanced monitoring; and
- Fuller evaluation.

6.8.6 It is proposed that the Greenways programme follows enhanced monitoring practice as the scheme is likely to be more than £50m in value.

Monitoring and Evaluation Plan

6.8.7 The outline Monitoring and Evaluation Plan is set out below in Table 6-5. Monitoring of the key outcomes including cycle and pedestrian usage of the scheme will be implemented at key locations on the route. The monitoring will be undertaken through targeted counts, as a minimum on an annual basis, preferably more regularly to assess seasonal effects, assessing the new active mode usage with baseline demand. The Monitoring and Evaluation Plan will also monitor actual scheme expenditure compared to budget, and project delivery compared with key scheme programme milestones.

Table 6-5 – Outline Monitoring and Evaluation Plan

Objective	Enabling objective / outcome	Performance indicator	Methodology	Timescale	Owner of Monitoring Task
Encourage commuting by sustainable transport modes and reduce traffic congestion	Capacity: Provide the cycle network capacity to accommodate increases in active travel demand due to new housing and employment growth	Increase in cycle network capacity. Ability to contribute to a reduction in vehicular road traffic Propensity to reduce congestion/delay	Active travel surveys Non-motorised user counts Traffic counts Before and after implementation queue length survey	Pre or during delivery / post opening (up to 5 years)	GCP

Contribute to improved air quality and better public health	Connectivity: Improve accessibility to jobs and opportunities by active modes through a reduction in journey times and increase ease of interchange with public transport modes	Reduced journey time for cycling Scale of catchment (jobs, housing) Ability to unlock growth. Ease of interchange with public transport	Before and after air quality monitoring using air quality measurement facilities Active travel surveys Land use surveys and land value change assessments	Pre or during delivery / post opening (up to 5 years)	GCP
	Communities: Contribute to the creation of safe and attractive communities by reducing emissions, severance and the dominance of traffic improving personal security and road safety	Road safety Protection of green spaces; net biodiversity gain Environment (air quality and carbon reduction) Quality of the public realm Severance	Assessment of road traffic collisions Before and after air quality monitoring using air quality measurement facilities	Pre or during delivery / post opening (up to 5 years)	GCP
Efficient project delivery	Cost during construction and outturn costs against budget	Cost expenditure compared to milestones	Cost monitoring by area of spend compared with programme	During and post opening	GCP

Benefits Realisation Plan

6.8.8 The Benefits Realisation Plan is shown in Table 6-6.

Table 6-6 – Benefits Realisation Plan

Objective Supported	Enabling changes	Benefits experienced	Who will benefit	Benefit Owner
Capacity: Provide the cycle network capacity to accommodate increases in active travel demand due to new housing and	Provision of segregated cycling infrastructure: attract new active mode users in the Horningsea corridor	Unlock economic growth by providing new transport capacity / encouraging new residents to commute using	Residents / employees / wider community	GCP / South Cambridgeshire District Council / Cambridge City Council

employment growth		active modes into Cambridge		
Connectivity: Improve accessibility to jobs and opportunities by active modes through a reduction in journey times and increased ease of interchange with public transport modes	Provision of new cycling infrastructure offering more direct routes/links and developing network connectivity with the Swaffham and Bottisham Greenways and other Cambridge active mode networks	Increased active mode transport accessibility to jobs in the city centre Mode shift from car to active modes	Residents / employees / wider community	GCP / South Cambridgeshire District Council / Cambridge City Council
Communities: Contribute to the creation of safe and attractive communities by reducing emissions, severance and the dominance of traffic improving personal security and road safety	Provision of new cycling infrastructure – development of dedicated active mode corridor leading to safer and healthier cycling & walking environment	Greater active mode travel safety Reduced GHG emissions, more linked habitats along the Horningsea Greenway corridor contributing to Bio-diversity Net Gain Reduced severance effect on residential communities due to traffic congestion relief Improved well-being of travellers, with positive effects for businesses through higher productivity	Residents / employees / wider community	GCP / South Cambridgeshire District Council / Cambridge City Council

Data Management/Security and Project Closure

6.8.9 Project Closure - the Executive Board will formally close the project, following the consideration of the Project Review Report.

Appendix A

Scheme Detailed Design Drawings

Confidential

C3 Summary Responses		
Utility Company	Response	Comments
Anglian Water	No diversions required	Following measures to be taken where applicable - All manhole covers must be adjusted to suit the finished surface level, using Class B engineering Brickwork - Any manhole now falling in the carriageway, due to your proposed works, must have their covers and frames replaced to comply with BSEN 124 D400 (grade A) and be badged 'FW' or 'SW' as appropriate. - No street furniture shoudl be placed direclty over our apparatus. - Due care and attention must be taken when working in the vicinity of our apparatus. - No recessed covers to be used on the public sewer.
Cadent Gas	No diversions required	No Apparatus found on Horningsea village.
Openreach BT	No diversions required	N/A
Cambridge Water	No diversions required	Depth of mains should be at a nominal depth of 900mm, service pipes should be laid at a nominal depth of 750mm. Both if required should be located through had dug trial hole excavation. A clear distance of at least 300mm must be maintained between the existing apparatus and proposed permanent features.
Cityfibre	No diversions required	No assets in the area
UKPN	No diversions required	N/A
Virgin Media	No diversions required	N/A
GTC	No diversions required	No Apparatus found on Horningsea village.
NEOS Networks	No diversions required	N/A
Sky	Infrastructure belongs to Virgin Media	N/A

PROPOSED SIGN TO DIAG 674 REF HS01

PROPOSED SIGN TO DIAG 675 REF HS02

DIRECTIONAL SIGNS FOR CYCLE ROUTE REF HS03

PROPOSED SIGN DIAG. 615 REF HS04

PROPOSED BOLLARD WITH KEEP RIGHT ARROW TO DIAG 610 REF HS05

EXISTING SIGN TO DIAG 670 (30MPH) & DIAG 670 (40MPH) MOUNTED BACK TO BACK TO BE REMOVED

EXISTING SIGN TO DIAG 956 & "END" SUPPLEMENTARY PLATE MOUNTED BACK TO BACK WITH SIGN TO DIAG 956 TO BE RETAINED

PROPOSED SIGN TO DIAG 517 TO BE PLACED ON EXISTING LAMP COLUMN. EXACT LOACTION TO BE CONFIRMED ON SITE WITH CCC ENGINEER. REF HS12

DIAG 1065 DIAG 1023A DIAG 1003A DIAG 1012.1 DIAG 1003 DIAG 1059 DIAG 1003 DIAG 1004 DIAG 1049 DIAG 1065

FOR CONTINUATION REFER TO MILESTONE DRAWINGS

HIGH STREET

20m

FOR CONTINUATION SEE BELOW

PROPOSED SIGN TO DIAG 674 REF HS06

PROPOSED SIGN TO DIAG 675 REF HS07

DIRECTIONAL SIGNS FOR CYCLE ROUTE REF HS08

PROPOSED SIGN TO DIAG. 811 REF HS09

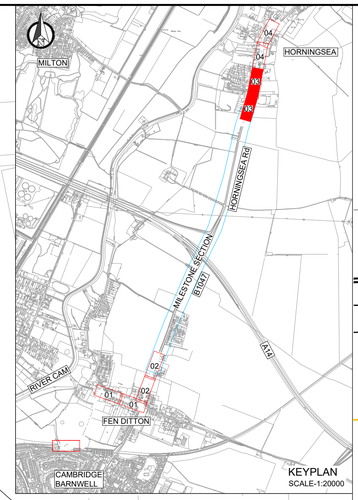
EXISTING VILLAGE GATEWAY SIGN TO BE RELOCATED

EXISTING SIGN TO DIAG 670 (30MPH) & DIAG 670 (40MPH) MOUNTED BACK TO BACK TO BE REMOVED

EXISTING ROAD NAME SIGN TO BE RETAINED

PROPOSED REPEATER SIGNS TO DIAG 670 (20MPH) TO BE MOUNTED BACK TO BACK REF HS10 & HS11

CYCLE SYMBOLS TO BE POSITIONED TRANSVERSELY CENTRALLY WITHIN THE RUNNING LANE



KEY

- PROPOSED SIGN
- EXISTING SIGN TO BE TAKEN DOWN AND REMOVED FOUNDATION TO BE BROKEN OUT AND LEVELLED TO FORMATION LEVEL
- EXISTING SIGN TO BE RETAINED AND PROTECTED FOR THE DURATION OF THE WORKS
- EXISTING SIGN PLATE TO BE RELOCATED
- PROPOSED BOLLARD
- PROPOSED KERBLINE

DIA REF	WIDTH (m)	COLOUR	LENGTH (m)	GAP (m)
1003A	0.200	WHITE	6.000	3
1004	0.100	WHITE	4.000	2
1009A	0.100	WHITE	0.600	0.300
1023A	1.250	WHITE	3.750	N/A
1057	0.750	WHITE	1.215	N/A
1018	0.075	YELLOW	N/A	N/A
1065	N/A	WHITE	4.300	N/A
1024	1.6	WHITE	N/A	N/A
1003	0.2	WHITE	N/A	1
1012.1	0.15	WHITE	N/A	N/A
1049	0.15	WHITE	N/A	N/A
1059	N/A	WHITE	1.000	N/A

NOTES

1. ALL DIMENSIONS ARE IN METRES UNLESS STATED OTHERWISE
2. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL RELATED DOCUMENTATION AND STANDARD DETAILS.
3. CONFLICTING INFORMATION SHOWN ON THE ENGINEER'S DRAWINGS OR DISCREPANCIES BETWEEN THE INFORMATION GIVEN BY THE DESIGNER AND THAT PROVIDED BY OTHERS MUST BE REFERRED TO THE DESIGNER BEFORE THE WORKS COMMENCE.
4. ALL TRAFFIC SIGNS AND ROAD MARKINGS TO BE IN ACCORDANCE WITH THE TRAFFIC SIGNS REGULATIONS AND GENERAL DIRECTIONS (TSRGD) 2016 AND CHAPTERS 1,3,4 & 5 OF THE TRAFFIC SIGNS MANUAL(TSM).
5. ALL ROAD MARKINGS TO BE THERMOPLASTIC MATERIAL IN ACCORDANCE WITH BS EN 1871 AND HAVE CLASS S3 SKID RESISTANCE IN ACCORDANCE WITH BS EN 1436. ALL WHITE ROAD MARKINGS TO HAVE REFLECTORISED GLASS BEADS IN ACCORDANCE WITH BS EN 1423 & BS EN 1424.
6. ROAD MARKINGS TO BE APPLIED USING THERMOPLASTIC PAINT AND SHALL ACHIEVE A MINIMUM 55 PSV UNLESS OTHERWISE STATED / AGREED IN WRITING WITH THE ADOPTING AUTHORITY.
7. WHEREVER PRACTICABLE SIGNS SHALL BE ERECTED/MOUNTED ON OTHER STREET FURNITURE (EG: LAMP COLUMNS) IN ORDER TO MINIMISE CLUTTER, AS INDICATED ON THE LAYOUT AND SIGNAGE SCHEDULE.
8. PRIOR TO EXCAVATION AND POURING OF ASSOCIATED FOUNDATIONS, THE CONTRACTOR SHALL AGREE THE FINAL LOCATIONS OF ALL SIGNS AND STREET FURNITURE WITH THE ADOPTING AUTHORITY.

REV	DATE	BY	DESCRIPTION	CHK	APD
P01	10/11/2023	AS	ISSUE FOR CONSTRUCTION APPROVAL		

EXISTING SIGN TO DIAG 637 TO BE RETAINED

PROPOSED SIGNS TO DIAG 674 (20MPH ZONE) & 675 (30MPH/20MPH ZONE ENDS) MOUNTED BACK TO BACK REF HS13 (674) & HS14 (675)

EXISTING ROAD NAME SIGN TO BE RETAINED

EXISTING 30MPH REINFORCEMENT SIGN TO BE REMOVED FROM LAMP COLUMN

EXISTING SIGN TO DIAG 637 TO BE RETAINED

PRIORY ROAD

LIMIT OF WORKS

PROPOSED SIGNS TO DIAG 674 (20MPH ZONE) & 675 (30MPH/20MPH ZONE ENDS) MOUNTED BACK TO BACK REF HS15 (674) & HS16 (675)

EXISTING ROAD NAME SIGN TO BE RETAINED

EXISTING VEHICLE ACTIVATED 30 MPH SIGN TO BE REPLACED WITH VEHICLE ACTIVATED 20 MPH SIGN TO DIAG. NUMBER 670

EXISTING NOTICE BOARD TO BE RETAINED

EXISTING SIGN TO DIAG 637 TO BE RETAINED

PROPOSED BOLLARD WITH KEEP RIGHT ARROW TO DIAG 610 REF HS17

DIAG 1023A DIAG 1003A DIAG 1004

FOR CONTINUATION SEE ABOVE

FOR CONTINUATION REFER TO DRG. 3562-WSP-HS-XX-DR-CV-251208

The Priory

HIGH STREET

PROPOSED REPEATER SIGNS TO DIAG 670 (20MPH) TO BE MOUNTED BACK TO BACK ON EXISTING LAMP COLUMN. EXACT LOACTION TO BE CONFIRMED ON SITE WITH CCC ENGINEER. REF HS18 & HS19

UNTIL TECHNICAL APPROVAL HAS BEEN OBTAINED FROM THE RELEVANT LOCAL AUTHORITIES OR STATUTORY BODIES, IT SHOULD BE UNDERSTOOD THAT ALL DRAWINGS ARE ISSUED AS PRELIMINARY AND NOT FOR CONSTRUCTION. SHOULD THE CONTRACTOR AND / OR EMPLOYER COMMENCE WORK PRIOR TO APPROVAL BEING GIVEN, IT IS ENTIRELY AT THEIR OWN RISK

DRAWING STATUS

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CLIENT

GREATER CAMBRIDGE PARTNERSHIP

PROJECT

HORNINGSEA GREENWAY DETAILED DESIGN

TITLE

PROPOSED TRAFFIC SIGNS & ROAD MARKINGS
SHEET 03 OF 04

SCALE @ A1	DATE	DESIGN/DRAWN	CHECKED	APPROVED	SHEET
1:250	29/03/2023	AS	AKM	ACC	A1

WSP PROJECT NO.

70113562

DRAWING No.	REV.
3562-WSP-HS-XX-DR-CV-251203	P01

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Sign Reference	Diagram Number	x-height (mm)	Width (mm)	Height (mm)	Area (m^2)	Background Colour	Border Colour	Legend Colour	Mounting Height (mm)	Post Quantity	Post Type	Post Length (mm)	Base Type	Base Diameter (mm)	Base Depth (mm)	Base Volume (m^3)	Earth Cover (mm)	Illuminated	Further Details
HS01	674 - 20mph	50	750	975	0.73	White	Black	Black	2300	1	76.1 x 3.2 CHS	4390	Planted	350	900	0.09	100	No	HS01 mounted back to back with HS02
HS02	675 - 20mph Zone Ends	50	750	1090	0.82	White	Black	Black	2300										
HS03	Proposed directional sign for cycle route to be confirmed																		
HS04	615	N/A	600	600	0.28	White	Red	Black	2300	1	76.1 x 3.2 CHS	3600	Planted	300	600	0.04	100	No	
HS05	610	N/A	300	300	0.07	Blue	White	White	N/A	N/A	N/A	N/A	Bolted	N/A	N/A	N/A	N/A	No	To be mounted on a proposed EVO-S Solar Traffic Bollard by TMP
HS06	674 - 20mph	50	750	975	0.73	White	Black	Black	2300	1	76.1 x 3.2 CHS	4390	Planted	350	900	0.09	100	No	HS06 mounted back to back with HS07
HS07	675 - 20mph Zone Ends	50	750	1090	0.82	White	Black	Black	2300										
HS08	Proposed directional sign for cycle route to be confirmed																		
HS09	811	N/A	525	600	0.32	Blue	Black	Black	2300	1	76.1 x 3.2 CHS	3750	Planted	300	750	0.05	100	No	
	Supplementary Plate	37.5	525	290	0.15	White	Black	Black	2000										
HS10	670 - 20mph Repeater	N/A	300	300	0.07	White	Red	Black	2300	1	76.1 x 3.2 CHS	3300	Planted	300	600	0.04	100	No	HS10 mounted back to back with HS11
HS11	670 - 20mph Repeater	N/A	300	300	0.07	White	Red	Black	2300										
HS12	517	N/A	680	600	0.24	White	Red	Black	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No	To be mounted on existing lamp column. Exact location to be confirmed on site with CCC Engineer
HS13	674 - 20mph	50	750	975	0.73	White	Black	Black	2300	1	76.1 x 3.2 CHS	4390	Planted	350	900	0.09	100	No	HS13 mounted back to back with HS14
HS14	675- 20mph Zone Ends	50	750	1090	0.82	White	Black	Black	2300										
HS15	674 - 20mph	50	750	975	0.73	White	Black	Black	2300	1	76.1 x 3.2 CHS	4390	Planted	350	900	0.09	100	No	HS15 mounted back to back with HS16
HS16	675 - 20mph Zone Ends	50	750	1090	0.82	White	Black	Black	2300										
HS17	610	N/A	300	300	0.07	Blue	White	White	N/A	N/A	N/A	N/A	Bolted	N/A	N/A	N/A	N/A	No	To be mounted on a proposed EVO-S Solar Traffic Bollard by TMP
HS18	670 - 20mph Repeater	N/A	300	300	0.07	White	Red	Black	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No	HS18 mounted back to back with HS19 on existing lamp column. Exact location to be confirmed on site with CCC Engineer
HS19	670 - 20mph Repeater	N/A	300	300	0.07	White	Red	Black	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No	
HS20	517	N/A	680	600	0.24	White	Red	Black	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No	To be mounted on existing lamp column. Exact location to be confirmed on site with CCC Engineer
HS21	610	N/A	300	300	0.07	Blue	White	White	N/A	N/A	N/A	N/A	Bolted	N/A	N/A	N/A	N/A	No	To be mounted on a proposed EVO-S Solar Traffic Bollard by TMP
HS22	670 - 20mph Repeater	N/A	300	300	0.07	White	Red	Black	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No	HS22 mounted back to back with HS23 on existing lamp column. Exact location to be confirmed on site with CCC Engineer
HS23	670 - 20mph Repeater	N/A	300	300	0.07	White	Red	Black	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No	
HS24	517	N/A	680	600	0.04	Wite	Red	Black	2300	1	76.1 x 3.2 CHS	3600	Planted	300	600	0.04	100	No	
HS25	610	N/A	300	300	0.07	Blue	White	White	N/A	N/A	N/A	N/A	Bolted	N/A	N/A	N/A	N/A	No	To be mounted on a proposed EVO-S Solar Traffic Bollard by TMP
HS26	670 - 20mph Repeater	N/A	300	300	0.07	White	Red	Black	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No	HS26 mounted back to back with HS27 on existing lamp column. Exact location to be confirmed on site with CCC Engineer
HS27	670 - 20mph Repeater	N/A	300	300	0.07	White	Red	Black	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No	
HS28	674 - 20mph	50	750	975	0.73	White	Black	Black	2300	1	76.1 x 3.2 CHS	4390	Planted	350	900	0.09	100	No	HS28 mounted back to back with HS29
HS29	675- 20mph Zone Ends	50	750	1090	0.82	White	Black	Black	2300										
HS30	674 - 20mph	50	750	975	0.73	White	Black	Black	2300	1	76.1 x 3.2 CHS	4390	Planted	350	900	0.09	100	No	HS30 mounted back to back with HS31
HS31	675- 20mph Zone Ends	50	750	1090	0.82	White	Black	Black	2300										
HS32	610	N/A	300	300	0.07	Blue	White	White	N/A	N/A	N/A	N/A	Bolted	N/A	N/A	N/A	N/A	No	To be mounted on a proposed EVO-S Solar Traffic Bollard by TMP
HS33	674 - 20mph	50	750	975	0.73	White	Black	Black	2300	1	76.1 x 3.2 CHS	4390	Planted	350	900	0.09	100	No	HS33 mounted back to back with HS34
HS34	675- 20mph Zone Ends	50	750	1090	0.82	White	Black	Black	2300										
HS35	674 - 20mph	50	750	975	0.73	White	Black	Black	2300	1	76.1 x 3.2 CHS	4240	Planted	750	750	0.33	100	No	HS35 mounted back to back with HS36 and HS40
HS36	675- 20mph Zone Ends	50	750	1090	0.82	White	Black	Black	2300										
HS37	674 - 20mph	50	750	975	0.73	White	Black	Black	2300	1	76.1 x 3.2 CHS	4390	Planted	350	900	0.09	100	No	HS37 mounted back to back with HS38
HS38	675- 20mph Zone Ends	50	750	1090	0.82	White	Black	Black	2300										
HS39	674 - 20mph	50	750	975	0.73	White	Black	Black	2300	1	76.1 x 3.2 CHS	4390	Planted	350	900	0.09	100	No	HS39 mounted back to back with HS40
HS40	675- 20mph Zone Ends	50	750	1090	0.82	White	Black	Black	2300										
HS41	816	N/A	480	480	0.23	Blue	White	White	1800	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No	To be mounted on same post as HS35 & HS36

UNTIL TECHNICAL APPROVAL HAS BEEN OBTAINED FROM THE RELEVANT LOCAL AUTHORITIES OR STATUTORY BODIES, IT SHOULD BE UNDERSTOOD THAT ALL DRAWINGS ARE ISSUED AS PRELIMINARY AND NOT FOR CONSTRUCTION. SHOULD THE CONTRACTOR AND / OR EMPLOYER COMMENCE WORK PRIOR TO APPROVAL BEING GIVEN, IT IS ENTIRELY AT THEIR OWN RISK

REV	DATE	BY	DESCRIPTION	CHK	APD
P01	10/11/2023	AS	ISSUE FOR CONSTRUCTION APPROVAL		

DRAWING STATUS
S4 - FOR APPROVAL

wsp
62-64 Hills Road, Cambridge, CB2 1LA, UK
T +44 (0) 1223 558 050, F +44 (0) 1223 558 051
www.wsp.com

CLIENT
GREATER CAMBRIDGE PARTNERSHIP

PROJECT
HORNINGSEA GREENWAY DETAILED DESIGN

TITLE
PROPOSED TRAFFIC SIGNS SCHEDULE

SCALE @ A1	DATE	DESIGN/DRAWN	CHECKED	APPROVED	SHEET
1:250	29/03/2023	AS	AKM	ACC	A1

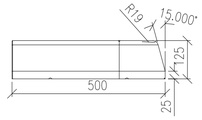
WSP PROJECT NO.
70113562

DRAWING No.
3562-WSP-HS-XX-DR-CV-251207

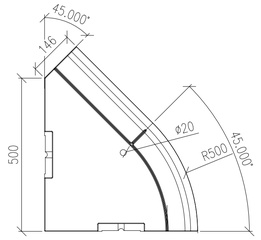
REV.
P01

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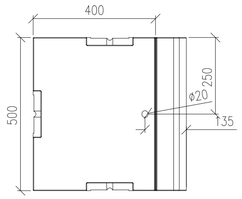
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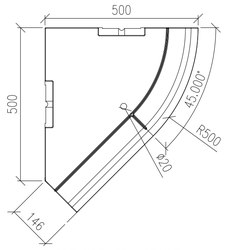
CORNER MODULE, SIDE ELEVATION



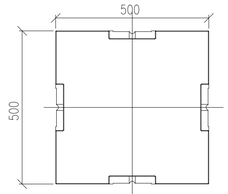
LEFT CORNER MODULE



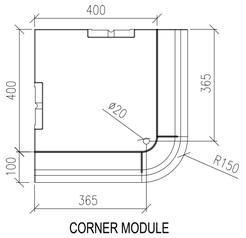
SQUARE EDGE MODULE



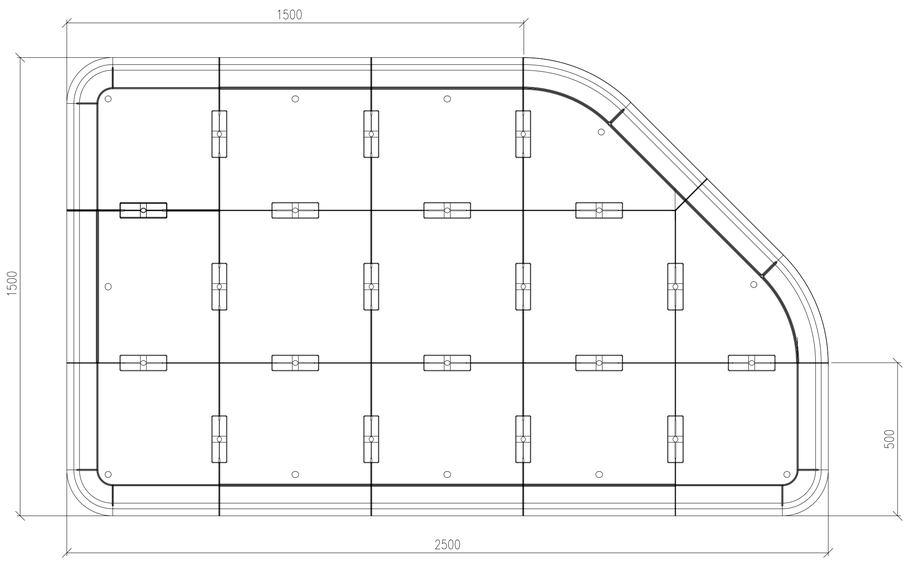
RIGHT CORNER MODULE



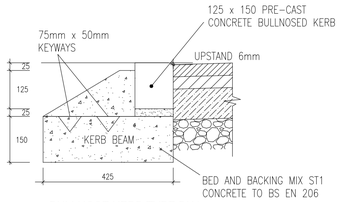
MIDDLE MODULE



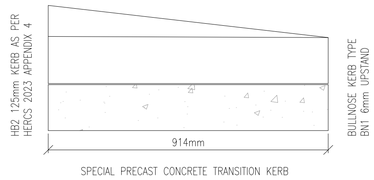
CORNER MODULE



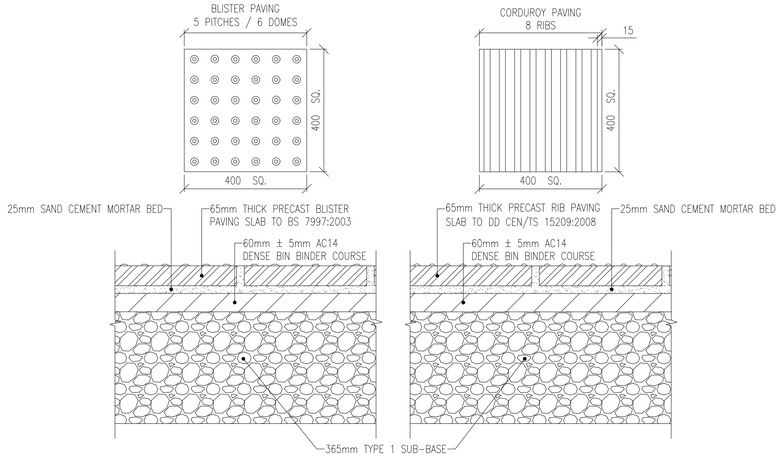
TRAFFIC ISLAND AND MODULES DETAIL - SUPPLIER TO BE REDIPAVE OR SIMILAR APPROVED
1:10



BULLNOSE KERB TYPE BN1
6mm UPSTAND
1:10

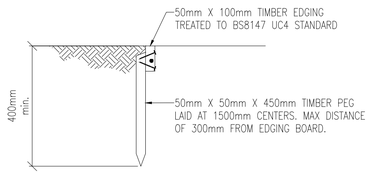


TR1-PRECAST CONCRETE TRANSITION KERBS
1:10



TACTILE BLISTER PAVING DETAIL
1:10

TACTILE CORDUROY PAVING DETAIL
1:10



TIMBER EDGING
1:10

0 0.5 metre

DO NOT SCALE

NOTES

1. DIMENSIONS SHALL NOT BE SCALED FROM THIS DRAWING. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE STATED.
2. THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH ALL RELEVANT DOCUMENTATION AND DRAWINGS.
3. ALL DESIGN TO BE DONE IN ACCORDANCE WITH HERCS 2023 GUIDANCE DOCUMENT UNLESS OTHERWISE STATED.
4. THE CONTRACTOR IS TO REFER TO THE HERCS FOR ANY ADDITIONAL DETAIL REQUIRED.
5. REFER TO DRAWING SERIES: 3562-WSP-HS-XX-DR-CV-250100 FOR GENERAL ARRANGEMENT.
6. REFER TO DRAWING SERIES: 3562-WSP-HS-XX-DR-CV-251200 FOR THE ROAD MARKINGS AND SIGNS STRATEGY.
7. REFER TO DRAWING: 3562-WSP-HS-XX-DR-CV-025950 FOR CROSS SECTIONS.
8. INDICATIVE BUILD OUT WIDTH TO VARY DEPENDING ON EXACT LOCATION OF BUILDOUT. REFER TO REDIPAVE MODULES FOR ASSEMBLY OF DESIRED SHAPES.

UNTIL TECHNICAL APPROVAL HAS BEEN OBTAINED FROM THE RELEVANT LOCAL AUTHORITIES OR STATUTORY BODIES, IT SHOULD BE UNDERSTOOD THAT ALL DRAWINGS ARE ISSUED AS PRELIMINARY AND NOT FOR CONSTRUCTION. SHOULD THE CONTRACTOR AND / OR EMPLOYER COMMENCE WORK PRIOR TO APPROVAL BEING GIVEN, IT IS ENTIRELY AT THEIR OWN RISK

REV	DATE	BY	DESCRIPTION	CHK	APP
P01	14/11/2023	RVA	ISSUED FOR CONSTRUCTION APPROVAL		

DRAWING STATUS: S4 - FOR APPROVAL

62-64 Hills Road, Cambridge, CB2 1LA, UK
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GREATER CAMBRIDGE PARTNERSHIP

SITE/PROJECT: HORNINGSEA GREENWAY DETAILED DESIGN

TITLE: STANDARD DETAILS

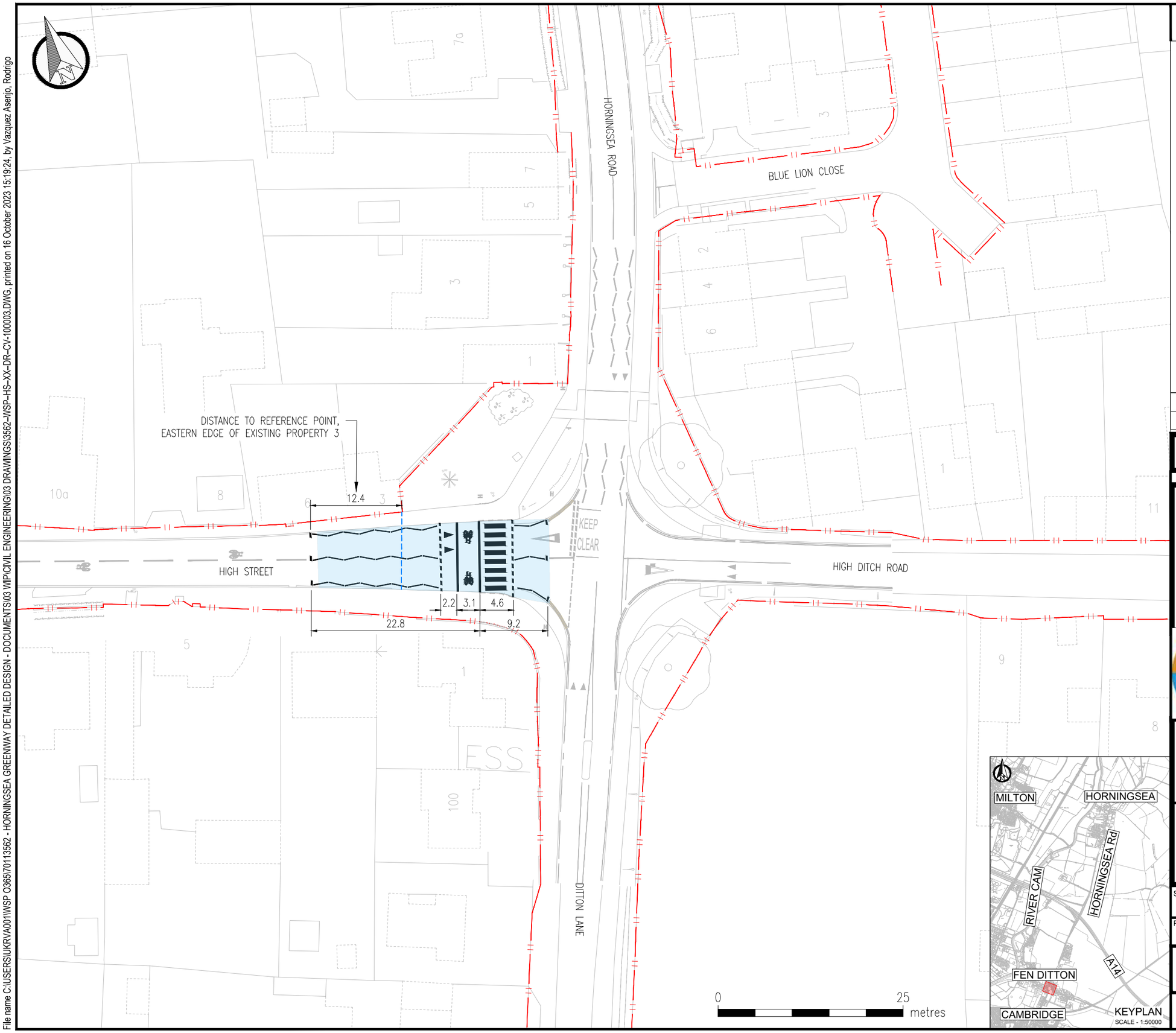
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1:10	AKM	ACC

PROJECT NO:	DESIGNED:	DRAWN:	DATE:
70113562	RVA	RVA	November 23

DRAWING No: 3562-WSP-HS-XX-DR-CV-050900 REV: P01

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File name C:\USERS\UKCB8005\WSP O365\70113562 - HORNINGSEA GREENWAY DETAILED DESIGN - DOCUMENTS\03 WIP\CIVIL ENGINEERING\02 DRAWINGS\282+\WSP-HS-XX-DR-CV-050900.DWG, printed on 14 November 2023 14:24:24, by Bushell, Cameron



DO NOT SCALE

KEY

- PROPOSED PARALLEL CROSSING LOCATION
- HIGHWAY BOUNDARY
- REFERENCE POINT LINE
- PROPOSED PARALLEL CROSSING ROAD MARKINGS

NOTES

1. ALL DIMENSIONS IN METRES UNLESS OTHERWISE STATED

UNTIL TECHNICAL APPROVAL HAS BEEN OBTAINED FROM THE RELEVANT LOCAL AUTHORITIES OR STATUTORY BODIES, IT SHOULD BE UNDERSTOOD THAT ALL DRAWINGS ARE ISSUED AS PRELIMINARY AND NOT FOR CONSTRUCTION. SHOULD THE CONTRACTOR AND / OR EMPLOYER COMMENCE WORK PRIOR TO APPROVAL BEING GIVEN, IT IS ENTIRELY AT THEIR OWN RISK

REV	DATE	BY	DESCRIPTION	CHK	APP
P01	13/09/2023	CB	FIRST ISSUE		

DRAWING STATUS: S2 - FOR INFORMATION

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GREATER CAMBRIDGE PARTNERSHIP

PROJECT: HORNINGSEA GREENWAY DETAILED DESIGN

TITLE: TRAFFIC REGULATION ORDER PROPOSED PARALLEL CROSSING FEN DITTON

SCALE @ A3:	CHECKED:		APPROVED:
1:500	RVA		ACC
PROJECT No:	DESIGNED:	DRAWN:	DATE:
70113562	CB	CB	October 23

DRAWING No: 3562-WSP-HS-XX-DR-CV-100003 REV: P01

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File name C:\USERS\UKRVA0011\WSP O365\70113562 - HORNINGSEA GREENWAY DETAILED DESIGN - DOCUMENTS\03 WIP\CIVIL ENGINEERING\03 DRAWINGS\3562-WSP-HS-XX-DR-CV-100003.DWG, printed on 16 October 2023 15:19:24, by Vazquez Asenjo, Rodrigo

PROPOSED QUIET STREET ENVIRONMENT

PROPOSED 20MPH SPEED LIMIT ON HORNINGSEA ROAD

EXISTING 'SLOW' MARKING TO BE REFRESHED

DISTANCE TO SETTING OUT REFERENCE, BOUNDARY OF PROPERTY 54

CH. 3100

CH. 3200

CH. 3250

FOR CONTINUATION REFER TO DRG. 3562-WSP-HS-XX-DR-CV-250103

HIGH STREET

SLOW

11.2

3.3

3.3

1.3

3.2

3.2

1.5

1.2

3.3

8.4

DISTANCE TO SETTING OUT REFERENCE, BOUNDARY OF PROPERTY 1

TRAFFIC REGULATION ORDER REQUIRED FOR TEMPORARY ROAD CLOSURE

TRAFFIC REGULATION ORDER REQUIRED FOR TEMPORARY ROAD CLOSURE

EXISTING BUS STOP

LIMIT OF WORKS

HIGH STREET

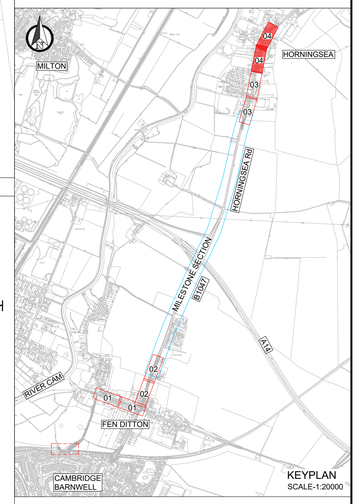
EXISTING 'SLOW' MARKING TO BE REFRESHED

FOR CONTINUATION SEE BELOW

0 1:250 12.5 metres

NOTES

1. THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH ALL RELEVANT DOCUMENTATION, DRAWINGS AND STANDARD DETAILS.
2. IN ACCORDANCE WITH THE CDM REGULATIONS RESIDUAL RISKS OF SIGNIFICANCE ARE INDICATED ON THE GA DRAWING.
3. DIMENSIONS SHALL NOT BE SCALED FROM THIS DRAWING. ALL DIMENSIONS IN METRES UNLESS OTHERWISE STATED.
4. ALL PROPOSED SHARED USE PATHS AND FOOTWAY RESURFACING TO HAVE A MINIMUM CROSSFALL OF 1:40 .
5. DESIGN BASED ON TOPOGRAPHICAL SURVEYS "44990_S1_T_REV0" AND "44990_S2_T_REV0" FROM "GREENHATCH", DATED 31/08/2022 & 16/09/2022 RESPECTIVELY.
6. DESIGN BASED ON HIGHWAY BOUNDARY PROVIDED BY GREATER CAMBRIDGESHIRE PARTNERSHIP ON 17/03/2021 AND CONFIRMED THROUGH CONSULTATION ON DATE 29/06/2023.
7. REFER TO DRAWING SERIES: 3562-WSP-HS-XX-DR-CV-251200 FOR ROAD MARKINGS AND SIGNS STRATEGY.
8. REFER TO DRAWING SERIES: 3562-WSP-HS-XX-DR-CV-250900 FOR CROSS SECTIONS.
9. REFER TO DRAWING SERIES: 3562-WSP-HS-XX-DR-CV-250910 FOR STANDARD DETAILS.



PROPOSED QUIET STREET ENVIRONMENT

PROPOSED 20MPH SPEED LIMIT ON HORNINGSEA ROAD

PROPOSED TRAFFIC SIGNS TO 20MPH ZONE / 30MPH - 20MPH ZONE ENDS

PROPOSED TRAFFIC SIGNS TO 20MPH ZONE / 30MPH - 20MPH ZONE ENDS

PROPOSED TRAFFIC SIGNS TO 20MPH ZONE / 30MPH - 20MPH ZONE ENDS

LIMIT OF WORKS

LIMIT OF WORKS

CH. 3300

CH. 3350

CH. 3400

CH. 3404

ST JOHNS LANE

DOCK LANE

EXISTING BUS STOP

HIGH STREET

3.2

1.0

1.2

3.3

3.3

11

DISTANCE TO SETTING OUT REFERENCE, SOUTHERN EDGE OF ACCESS GATE

TRAFFIC REGULATION ORDER REQUIRED FOR TEMPORARY ROAD CLOSURE

PROPOSED TRAFFIC SIGNS TO 20MPH ZONE / 30MPH - 20MPH ZONE ENDS

LIMIT OF WORKS

CLAYHITHE Rd

FOR CONTINUATION SEE ABOVE

SLOW

EXISTING 'SLOW' MARKING TO BE REFRESHED

0 1:250 12.5 metres

KEY

- PROPOSED CYCLEWAY / FOOTWAY RESURFACING AS PER HERCS 2023 APPENDIX 10 TYPE A
- PROPOSED CYCLEWAY / FOOTWAY NEW FULL DEPTH CONSTRUCTION AS PER HERCS 2023 APPENDIX 10 TYPE A
- PROPOSED CARRIAGEWAY RESURFACING AS PER HERCS 2023 APPENDIX 1
- PROPOSED RAISED TABLE EXTENSION
- PROPOSED BLOCK PAVING
- PROPOSED 800mm CORDUROY
- PROPOSED RED TACTILE PAVING
- PROPOSED ROAD MARKINGS
- EXISTING ROAD MARKING TO BE REMOVED THROUGH HYDROBLASTING
- PROPOSED BOLT DOWN TRAFFIC ISLAND
- PROPOSED TRAFFIC SIGN
- PROPOSED BOLLARD
- PROPOSED BELISHA BEACON
- HIGHWAY BOUNDARY
- WORK EXTENTS
- SETTING OUT REFERENCE LINE
- HB2 PROPOSED 125mm HB2 KERB - HERCS 2023 APPENDIX 4 KERB DETAIL
- DR PROPOSED 125MM TO 6MM DROPPER KERB
- BN PROPOSED BN 6MM DROPPED KERB
- TE PROPOSED TIMBER EDGING
- FF PROPOSED PCC EDGING KERB - HERCS 2023 APPENDIX 4 EDGING DETAIL
- Gy EXISTING GULLY
- Bg EXISTING KERB INLET
- 9.16 EXISTING LEVELS
- 9.16 PROPOSED LEVELS
- 1:30 PROPOSED CROSSFALL
- EXISTING REFLECTIVE STUDS TO BE TAKEN UP AND REMOVED TO TIP OFF SITE
- KERBS TO BE TAKEN UP AND REMOVED TO TIP OFF SITE

KEY TO HEALTH AND SAFETY SYMBOLS

	INDICATES A RESIDUAL RISK REQUIRING A COMPULSORY ACTION.
	INDICATES A RESIDUAL RISK FOR INFORMATION.
	INDICATES A RESIDUAL RISK REQUIRING A PROHIBITIVE ACTION.
	INDICATES A RESIDUAL RISK AS A WARNING.

IT SHOULD BE UNDERSTOOD THAT ALL DRAWINGS ARE ISSUED AS PRELIMINARY AND NOT FOR CONSTRUCTION. SHOULD THE CONTRACTOR AND / OR EMPLOYER COMMENCE WORK PRIOR TO APPROVAL BEING GIVEN, IT IS ENTIRELY AT THEIR OWN RISK

REV	DATE	BY	DESCRIPTION	CHK	APD
P01	14/11/2023	CB	ISSUED FOR CONSTRUCTION APPROVAL		

DRAWING STATUS: S4 - FOR APPROVAL

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www.wsp.com

CLIENT: GREATER CAMBRIDGE PARTNERSHIP

PROJECT: HORNINGSEA GREENWAY DETAILED DESIGN

TITLE: GENERAL ARRANGEMENT SHEET 04 OF 04

SCALE @ A1	DATE	DESIGN/DRAWN	CHECKED	APPROVED	SHEET
1:250	OCT 2023	RVA	AKM	ACC	A1

WSP PROJECT NO. 70113562

DRAWING No. 3562-WSP-HS-XX-DR-CV-250104 REV. P01

C:\Users\UKCBB0051\WSP 03561 70113562 - Horningsea Greenway detailed Design - Documents\03. WIP\Civil Engineering\03. Drawings\3562-WSP-HS-XX-DR-CV-250100.dwg 14 Nov, 2023 - 12:43pm

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CH. 2750

CH. 2800

CH. 2850

CH. 2900

FOR CONTINUATION REFER TO MILESTONE DRAWINGS

FOR CONTINUATION SEE BELOW

HORNINGSEA ROAD

HIGH STREET

UNKNOWN OVERHEAD CABLES

GULLEY LEADS CONNECTION TO SEWER TO BE CONFIRMED

SCOTSDALES GARDEN CENTER

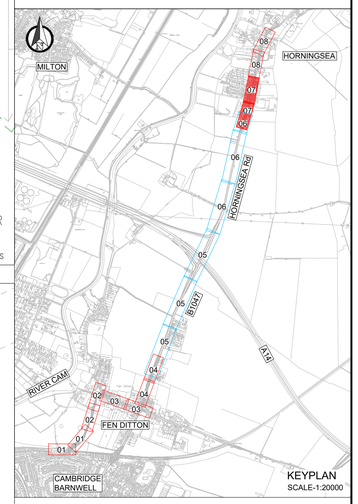
0 1:250 12.5 metres

KEY

- WORK EXTENTS
- BT — BT
- VM — VIRGIN MEDIA
- LP GAS — GAS – LOW PRESSURE
- WM — WATER MAIN
- FW SEWER
- FW RISING MAIN
- SURFACE WATER GRAVITY FLOW
- T — TELECOMS – NEOS
- LV — ELECTRICITY – LOW VOLTAGE
- HV — ELECTRICITY – HIGH VOLTAGE
- UNKNOWN OVERHEAD CABLES
- PROPOSED KERB

NOTES

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CH. 2950

CH. 3000

CH. 3050

PRIORY ROAD

LIMIT OF WORKS

FOR CONTINUATION SEE ABOVE

FOR CONTINUATION REFER TO DRG. 2621-WSP-HS-XX-DR-CV-252708

UNKNOWN OVERHEAD CABLES

HIGH STREET

GULLEY LEADS CONNECTION TO SEWER TO BE CONFIRMED

0 1:250 12.5 metres

KEY TO HEALTH AND SAFETY SYMBOLS

	INDICATES A RESIDUAL RISK REQUIRING A COMPULSORY ACTION.
	INDICATES A RESIDUAL RISK FOR INFORMATION.
	INDICATES A RESIDUAL RISK REQUIRING A PROHIBITIVE ACTION.
	INDICATES A RESIDUAL RISK AS A WARNING.

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REV	DATE	BY	DESCRIPTION	CHK	APD
P01	31/03/2023	CB	FIRST ISSUE		

DRAWING STATUS: S2 - FOR INFORMATION

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www.wsp.com

CLIENT: GREATER CAMBRIDGE PARTNERSHIP

PROJECT: HORNINGSEA GREENWAY

TITLE: C2 COMPOSITE UTILITY PLANS
SHEET 07 OF 08

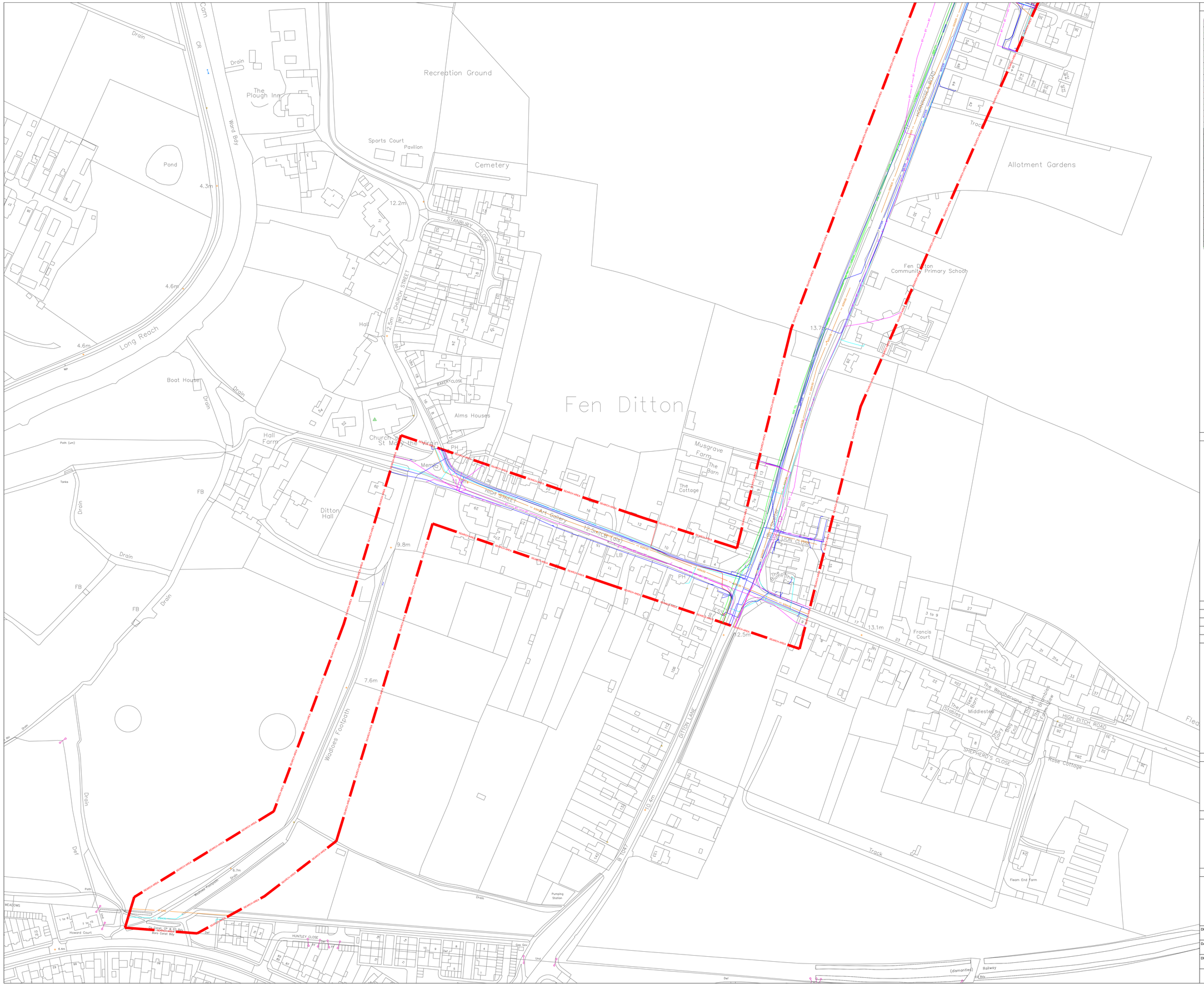
SCALE @ A1	DATE	DESIGN/DRAWN	CHECKED	APPROVED	SHEET
1:250	07/03/2023	CB	BKD	ACC	A1

WSP PROJECT NO. 70102621

DRAWING No. 2621-WSP-HS-XX-DR-CV-252707 REV. P01

\\uk.wspgroup.com\central data\Projects\70102xxx\70102621 - Combs, IPSF - Horningsea Greenway Detailed Design\03 WIP\Civil Engineering\03 Drawings\2621-WSP-HS-XX-DR-CV-252700.dwg 30 May, 2023 - 9:35am

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KEY

BT	BT	KCOM	KCOM
CL	CENTURY LINK	KPN	KPN
COLT	COLT	LON LND	LU POWERLINK
CITYFIBRE	CITY FIBRE	SEARCH AREA	SEARCH AREA
CSP FIBRE	CSP FIBRE	SEWER >>	FW SEWER
LV	LV ELEC	SEWER >>	SW SEWER
HV	HV ELEC	SEWER >>	COM SEWER
EHV	EHV ELEC	BSKYB	SKY
ENERGETICS	ENERGETICS UK	SSE TEL	SSE TELECOM
ES PIPELINES	ES PIPELINES	TATA	TATA
EU NETWORKS	EU NETWORKS	TELENT	TELENT
FULCRUM	FULCRUM	TFL	TFL
GAMMA	GAMMA	VERIZON	VERIZON
LP GAS	GAS - LP	VIRGIN	VIRGIN
MP GAS	GAS - MP	VODAFONE	VODAFONE
IP GAS	GAS - IP	WATER	WATER
HP GAS	GAS - HP	ZAYO	ZAYO
GTC	GTC	G-NET	G NETWORK
GTT	GTT		
INSTALCOM	INSTALCOM		

LINES MAY INDICATE MULTIPLE ASSETS

NOTES:

- **THIS DRAWING IS A REPRESENTATIVE "FUSION PLAN" COMPILED FROM PLANS PROVIDED BY ASSET OWNING ORGANISATIONS WHOSE PLANT OR ASSETS COULD BE AFFECTED BY WORKS UNDERTAKEN ON THE SITE DETAILED HEREIN.**
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- **THE INFORMATION PROVIDED ON THIS MAPPING PLAN IS BASED ON HISTORIC RECORDS PROVIDED BY THE STATUTORY UNDERTAKERS. THE ACTUAL POSITION AND STATUS OF ANY MAINS AND SERVICES MUST BE VERIFIED ON SITE. THIS PLAN IS FOR INFORMATION PURPOSES ONLY.**
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- **UNDERGROUND SERVICES MUST BE LOCATED IN ACCORDANCE WITH HSE GUIDANCE NOTE HS (G) 47 AND BSI's PAS 128 2014.**

REV	REVISION DETAILS	DATE

centara
Bureau Services
1-2 Woodside Court, Normanton Business Park
Normanton, West Yorkshire, WF6 1SB
www.centara-ltd.com tel: 01924 220726

PROJECT

Horningsea 4km

CLIENT

wsp

DRAWING TITLE

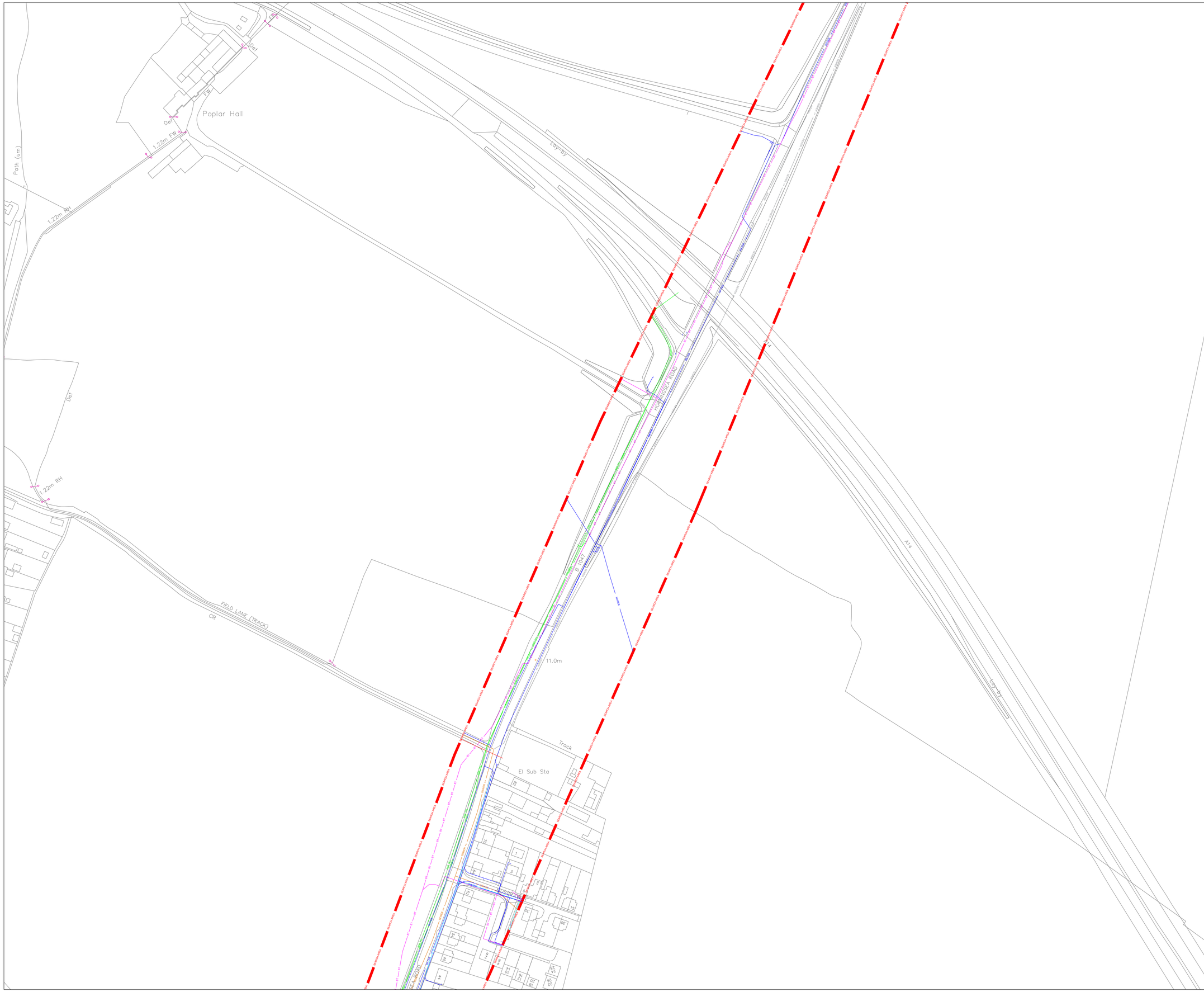
FUSION PLAN

DRAWN BY:	CHECKED BY:	REQUESTED BY:
J.Reape	C.Cockerham	A.Malecki

DATE:	SCALE:
03/08/2022	1:1000 @ A0

DRAWING NUMBER:	REVISION:
CEN22168	A

SHEET 01 of 04



KEY

BT	BT	KCOM	KCOM
CL	CENTURY LINK	KPN	KPN
COLT	COLT	LON LND	LU POWERLINK
CITYFIBRE	CITY FIBRE	SEARCH AREA	SEARCH AREA
CSP FIBRE	CSP FIBRE	SEWER >>	FW SEWER
LV	LV ELEC	SEWER >>	SW SEWER
HV	HV ELEC	SEWER >>	COM SEWER
EHV	EHV ELEC	BSKYB	SKY
ENERGETICS	ENERGETICS UK	SSE TEL	SSE TELECOM
ES PIPELINES	ES PIPELINES	TATA	TATA
EU NETWORKS	EU NETWORKS	TELENT	TELENT
FULCRUM	FULCRUM	TFL	TFL
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GTT	GTT		
INSTALCOM	INSTALCOM		

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centara
Bureau Services
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Normanton, West Yorkshire, WF6 1SB
www.centara-ltd.com tel: 01924 220726

PROJECT

Horningsea 4km

CLIENT

wsp

DRAWING TITLE

FUSION PLAN

DRAWN BY:	CHECKED BY:	REQUESTED BY:
J.Reape	C.Cockerham	A.Malecki

DATE:	SCALE:
03/08/2022	1:1000 @ A0

DRAWING NUMBER:	REVISION:
CEN22168	A



KEY

BT	BT	KCOM	KCOM
CL	CENTURY LINK	KPN	KPN
COLT	COLT	LON UND	LU POWERLINK
CITYFIBRE	CITY FIBRE	SEARCH AREA	SEARCH AREA
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EHV	EHV ELEC	BSKYB	SKY
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centara
Bureau Services
1-2 Woodside Court, Normanton Business Park
Normanton, West Yorkshire, WF6 1SB
www.centara-ltd.com tel: 01924 220726

PROJECT

Horningsea 4km

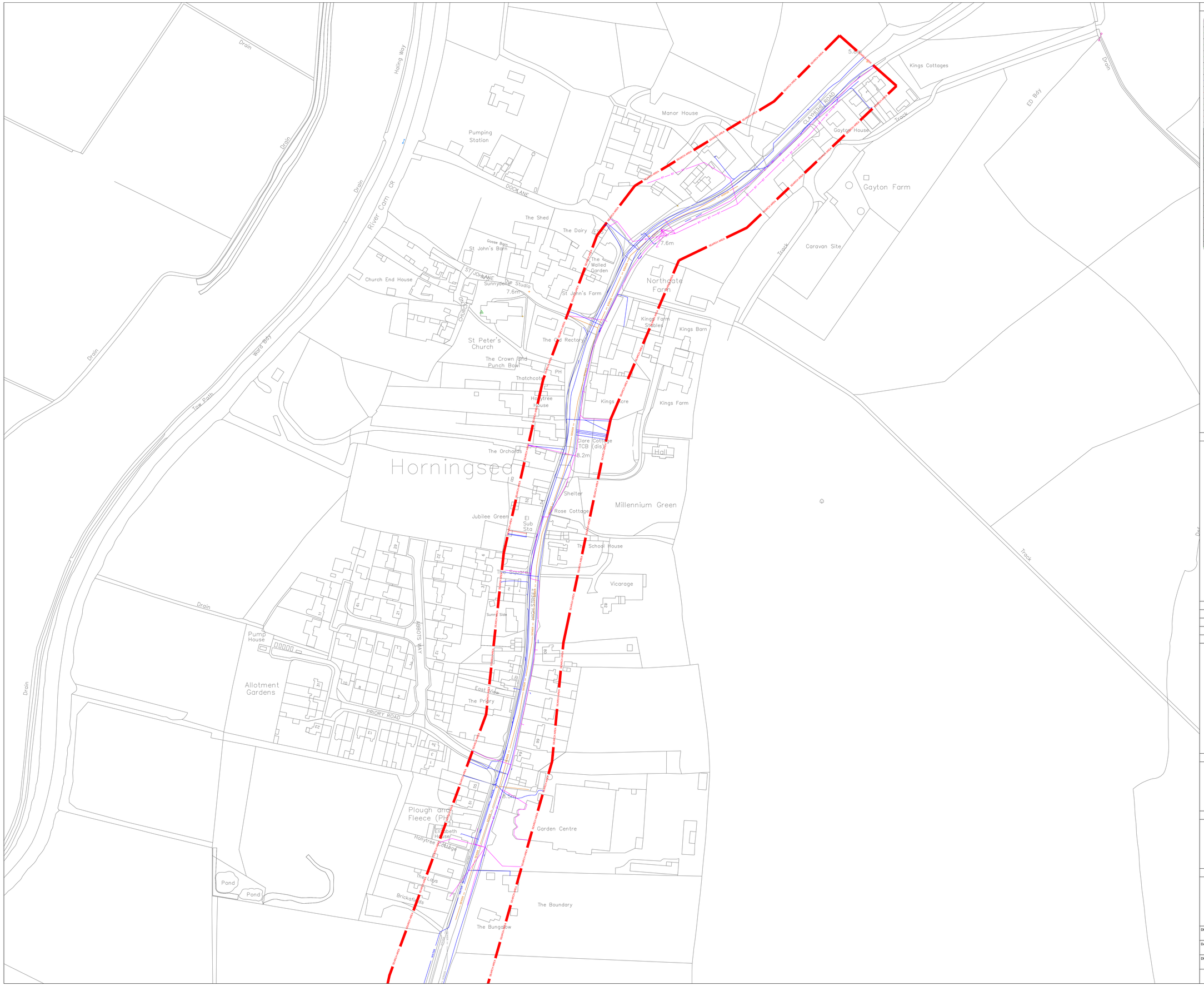
CLIENT

wsp

DRAWING TITLE

FUSION PLAN

DRAWN BY:	CHECKED BY:	REQUESTED BY:
J.Reape	C.Cockerham	A.Malecki
DATE: 03/08/2022		SCALE: 1:1000 @ A0
DRAWING NUMBER: CEN22168		REVISION: A



KEY

BT	BT	KCOM	KCOM
CL	CENTURY LINK	KPN	KPN
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HV	HV ELEC	SEWER >>	COM SEWER
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REV	REVISION DETAILS	DATE

centara
Bureau Services
1-2 Woodside Court, Normanton Business Park
Normanton, West Yorkshire, WF6 1SB
www.centara-ltd.com tel: 01924 220726

PROJECT

Horningsea 4km

CLIENT

wsp

DRAWING TITLE

FUSION PLAN

DRAWN BY:	CHECKED BY:	REQUESTED BY:
J.Reape	C.Cockerham	A.Malecki

DATE:	SCALE:
03/08/2022	1:1000 @ A0

DRAWING NUMBER:	REVISION:
CEN22168	A

SHEET 04 of 04

CH. 3100

CH. 3100

FOR CONTINUATION REFER TO DRG. 2621-WSP-HS-XX-DR-CV-252707

HIGH STREET

ST JOHN'S LANE

UNKNOWN OVERHEAD CABLES

CH. 3200

CH. 3250

HIGH STREET

FOR CONTINUATION SEE BELOW

UNKNOWN OVERHEAD CABLES

HIGH STREET

0 1:250 12.5 metres

CH. 3300

CH. 3350

ST JOHN'S LANE

LIMIT OF WORKS

HIGH STREET

CH. 3400

CH. 3404

LIMIT OF WORKS

DOCK LANE

LIMIT OF WORKS

FOR CONTINUATION SEE ABOVE

UNKNOWN OVERHEAD CABLES

END OF HORNINGSEA GREENWAY

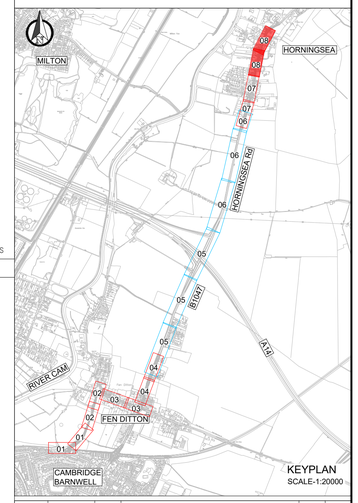
0 1:250 12.5 metres

KEY

- WORK EXTENTS
- BT — BT
- VM — VIRGIN MEDIA
- LP GAS — GAS – LOW PRESSURE
- WM — WATER MAIN
- FW SEWER
- FW RISING MAIN
- SURFACE WATER GRAVITY FLOW
- T — TELECOMS – NEOS
- LV — ELECTRICITY – LOW VOLTAGE
- HV — ELECTRICITY – HIGH VOLTAGE
- UNKNOWN OVERHEAD CABLES
- PROPOSED KERB

NOTES

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REV	DATE	BY	DESCRIPTION	CHK	APD
P01	31/03/2023	CB	FIRST ISSUE		

DRAWING STATUS

S2 - FOR INFORMATION

62-64 Hills Road, Cambridge, CB2 1LA, UK
T +44 (0) 1223 558 050, F +44 (0) 1223 558 051
www.wsp.com

CLIENT

GREATER CAMBRIDGE PARTNERSHIP

PROJECT

HORNINGSEA GREENWAY

TITLE

C2 COMPOSITE UTILITY PLANS
SHEET 08 OF 08

SCALE @ A1	DATE	DESIGN/DRAWN	CHECKED	APPROVED	SHEET
1:250	07/03/2023	CB	BKD	ACC	A1

WSP PROJECT NO.

70102621

DRAWING No.

2621-WSP-HS-XX-DR-CV-252708

REV.

P01

KEY TO HEALTH AND SAFETY SYMBOLS

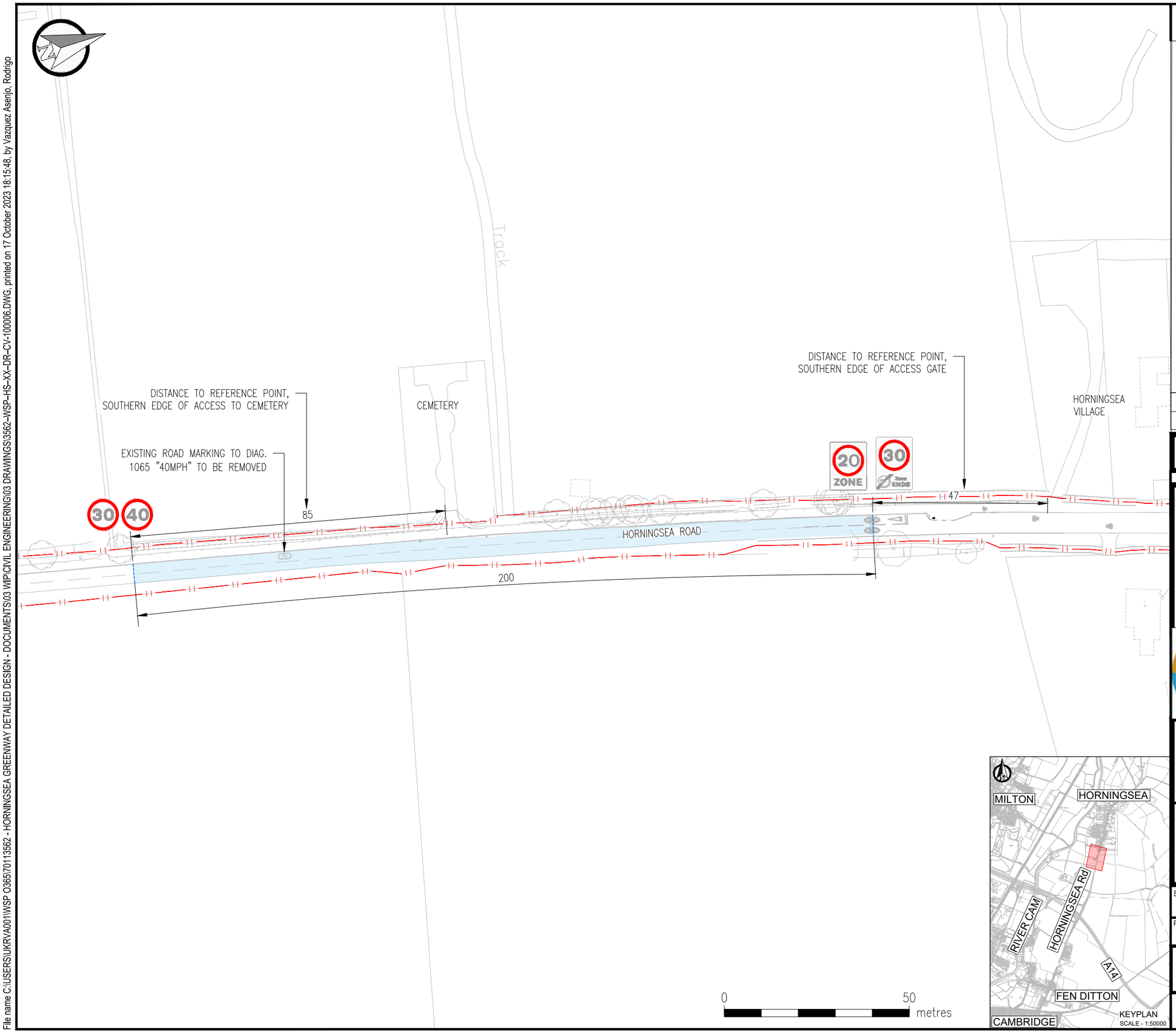
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	INDICATES A RESIDUAL RISK FOR INFORMATION.
	INDICATES A RESIDUAL RISK REQUIRING A PROHIBITIVE ACTION.
	INDICATES A RESIDUAL RISK AS A WARNING.

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\\uk.wspgroup.com\central data\Projects\70102xxx\70102621 - Cambs. HPSF - Horningsea Greenway Detailed Design\03. WIP\Civil Engineering\03 Drawings\2621-WSP-HS-XX-DR-CV-252700.dwg 30 May, 2023 - 9:37am



DO NOT SCALE

KEY

- EXTENTS OF PROPOSED 30 MPH BUFFER ZONE
- HIGHWAY BOUNDARY
- LOCATION OF SPEED LIMIT SIGNS

NOTES

1. ALL DIMENSIONS IN METRES UNLESS OTHERWISE STATED

UNTIL TECHNICAL APPROVAL HAS BEEN OBTAINED FROM THE RELEVANT LOCAL AUTHORITIES OR STATUTORY BODIES, IT SHOULD BE UNDERSTOOD THAT ALL DRAWINGS ARE ISSUED AS PRELIMINARY AND NOT FOR CONSTRUCTION. SHOULD THE CONTRACTOR AND / OR EMPLOYER COMMENCE WORK PRIOR TO APPROVAL BEING GIVEN, IT IS ENTIRELY AT THEIR OWN RISK

REV	DATE	BY	DESCRIPTION	CHK	APP
P01	17/10/2023	CB	FIRST ISSUE		

DRAWING STATUS: S2 - FOR INFORMATION

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62-64 Hills Road, Cambridge, CB2 1LA, UK
T+ 44 (0) 1223 558 050, F+ 44 (0) 1223 558 051
wsp.com

GREATER CAMBRIDGE PARTNERSHIP

PROJECT: HORNINGSEA GREENWAY DETAILED DESIGN

TITLE: TRAFFIC REGULATION ORDER PROPOSED 30MPH BUFFER ZONE HORNINGSEA ROAD

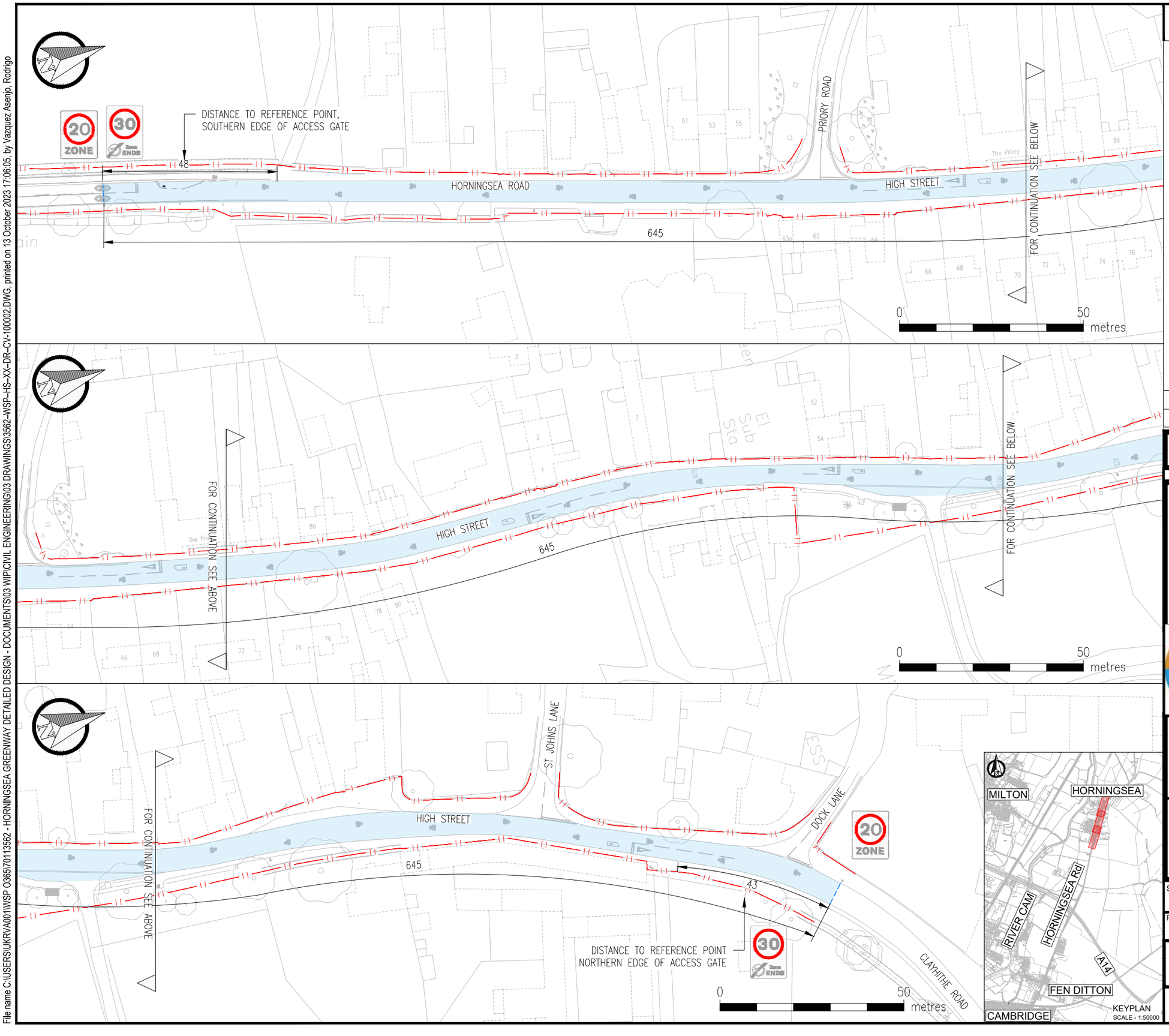
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SCALE @ A3:	CHECKED:		APPROVED:
1:1000	RVA		ACC
PROJECT No:	DESIGNED:	DRAWN:	DATE:
70113562	CB	CB	October 23

DRAWING No: 3562-WSP-HS-XX-DR-CV-100006 REV: P01

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File name C:\USERS\UKRVA001\WSP O365\70113562 - HORNINGSEA GREENWAY DETAILED DESIGN - DOCUMENTS\03 WIP\CIVIL ENGINEERING\03 DRAWINGS\3562-WSP-HS-XX-DR-CV-100006.DWG, printed on 17 October 2023 18:15:48, by Vazquez Asenjo, Rodrigo



File name C:\USERS\UKRVA001\WSP O365\70113562 - HORNINGSEA GREENWAY DETAILED DESIGN - DOCUMENTS\03 WIP\CIVIL ENGINEERING\03 DRAWINGS\3562-WSP-HS-XX-DR-CV-100002.DWG, printed on 13 October 2023 17:06:05, by Vazquez Asenjo, Rodrigo

DO NOT SCALE

KEY

- EXTENTS OF PROPOSED 20 MPH ZONE
- HIGHWAY BOUNDARY
- LOCATION OF SPEED LIMIT SIGNS

NOTES

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REV	DATE	BY	DESCRIPTION	CHK	APP
P01	13/09/2023	CB	FIRST ISSUE		

DRAWING STATUS: S2 - FOR INFORMATION

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62-64 Hills Road, Cambridge, CB2 1LA, UK
T+ 44 (0) 1223 558 050, F+ 44 (0) 1223 558 051
wsp.com

GREATER CAMBRIDGE PARTNERSHIP

PROJECT: HORNINGSEA GREENWAY DETAILED DESIGN

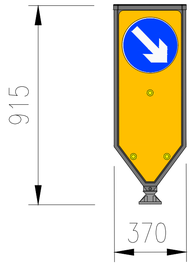
TITLE: TRAFFIC REGULATION ORDER PROPOSED 20MPH ZONE HORNINGSEA ROAD - HIGH STREET

SCALE @ A3:	CHECKED:		APPROVED:
1:1000	RVA		ACC
PROJECT No:	DESIGNED:	DRAWN:	DATE:
70113562	CB	CB	October 23

DRAWING No:	REV:
3562-WSP-HS-XX-DR-CV-100002	P01

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Signing Project	Horningsea Greenway				
Sign Reference	Bollard – 610	Width (mm)	300	Background	Blue
x Height	610	Height (mm)	300	Border	White
Material	Class RA2	Area (sq.m)	0.36	Legend	



Structural Calculation Details

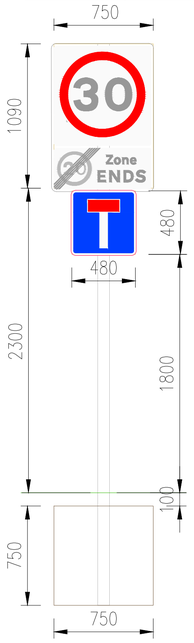
Signs:
- Reference: HS05, HS17, HS21, HS25, HS32
- Width: 300mm, Height: 300mm
- Shape: Roundel
- Orientation: Facing front
- Mounted on Bollard

Bollard:
- Type: EVO-S Solar Traffic Bollard by TMP
- Width: 370mm, Height: 915mm
- Base Type: Bolted

Signing Project	Horningsea Greenway				
Sign Reference	674	Width (mm)	750	Background	White
x Height	50.0	Height (mm)	975	Border	Black
Material	Class RA2	Area (sq.m)	0.73	Legend	Black

Signing Project	Horningsea Greenway				
Sign Reference	675	Width (mm)	750	Background	White
x Height	50.0	Height (mm)	1090	Border	Black
Material	Class RA2	Area (sq.m)	0.82	Legend	Black

Signing Project	Horningsea Greenway				
Sign Reference	816	Width (mm)	480	Background	Blue
x Height	100	Height (mm)	480	Border	White
Material	Class RA2	Area (sq.m)	0.23	Legend	



Structural Calculation Details

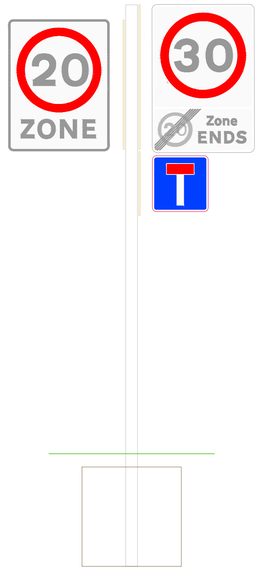
Signs:
- Reference: HS35
- Width: 750mm, Height: 975mm
- Shape: Rectangle
- Orientation: Facing back
- Mounted on posts: 1
- Mounting height: 2300mm, at post

- Reference: HS36
- Width: 750mm, Height: 1090mm
- Shape: Rectangle
- Orientation: Facing front
- Mounted on posts: 1
- Mounting height: 2300mm, at post

- Reference: HS41
- Width: 480mm, Height: 480mm
- Shape: Rectangle
- Orientation: Facing front
- Mounted on posts: 1
- Mounting height: 1800mm, at post

Posts:
- Quantity: 1
- Type: 88.9 x 3.2 CHS (S355)
- Spacing: N/A
- Post 1 Length: 4240mm

Base:
- Type: Planted
- Diameter: 750mm
- Depth: 750mm
- Volume: 0.33cu.m
- Earth cover: 100mm



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REV	DATE	BY	DESCRIPTION	CHK	APD
P01	10/11/2023	AS	ISSUE FOR CONSTRUCTION APPROVAL		

DRAWING STATUS
S4 - FOR APPROVAL

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CLIENT
GREATER CAMBRIDGE PARTNERSHIP

PROJECT
HORNINGSEA GREENWAY DETAILED DESIGN

TITLE
PROPOSED TRAFFIC SIGN DETAILS

SCALE @ A1	DATE	DESIGN/DRAWN	CHECKED	APPROVED	SHEET
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REV.
P01

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PRE-CONSTRUCTION INFORMATION PACK

HORNINGSEA GREENWAY DETAILED DESIGN

(CAMBRIDGESHIRE COUNTY COUNCIL – GCP)

PRE-CONSTRUCTION INFORMATION PACK

Document Identification Number:	3562-WSP-HS-XX-RP-CM-PCI
Issue Number:	1
Date:	November 2023

DOCUMENT AUTHORISATION SHEET

Client:	Greater Cambridge Partnership
Document Title	GCP Horningsea Greenway PCI

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2	Dan Woods	Contractor	Milestone Infrastructure
3	Dan Arnold	Contractor	Milestone Infrastructure
4			
5			
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7			
8			
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10			

ISSUE RECORD

Issue	Date	Description of Changes/Amendments	By	Approval
1	November 2023	First Draft	Rodrigo Vazquez Asenjo	Livio Martelli

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1 INTRODUCTION

This Pre-Construction Health and Safety Information Pack has been prepared in accordance with the Construction (Design and Management) Regulations 2015. It is a document which will eventually be developed into the Construction Phase (Health and Safety) Plan by the contractor on single contractor projects or the contractor appointed as the Principal Contractor for projects with more than one contractor. Initially it will be used to collate and summarise the information provided by the Client for use by the designers and contractors appointed, or being considered for appointment, on the project. All those involved with the pre-construction phase have a statutory duty to comply with it and to provide the Principal Designer with any information they have which is required to keep the pack up to date.

It is the intention of the Client that the project be designed and constructed in such a way that the risks to the health and safety of all persons engaged in its construction, future use, cleaning and maintenance or using a structure designed as a workplace are eliminated or reduced to an acceptable level.

This Information Pack is to provide information only and does not form part of the Contract. The full scope of the Works, the duration of the contract and the obligations of the Contractor, shall be ascertained by reference to the Contract documents read as a whole.

2 IDENTIFICATION OF ROLES

Please refer to section 9.4 for contact details.

2.1 Client

Greater Cambridge Partnership (GCP) is the Client as defined under the Construction (Design and Management) Regulations 2015.

2.2 Principal Designer

The Principal Designer for the Detailed Design Stage of the Horningsea Greenway is WSP

2.3 Principal Contractor

The Principal Contractor is Milestone Infrastructure

The duties of the Principal Contractor are set out in Construction (Design and Management) Regulations 2015. [Note that this includes preparation of the Construction Phase (Health and Safety) Plan, **prior** to the commencement of works on site].

2.4 Contractor

The Principal Contractor shall be responsible for the implementation of all safety management measures necessary for the execution of the work, and for the management of all Contractors on the site. All Contractors shall comply with the Construction Phase (Health and Safety) Plan, and with all relevant legislation, regulations or codes of practice.

2.5 Designer

Under the CDM Regulations, a Designer is anybody who either prepares a design or arranges for a person under his/her control to prepare a design. Whilst designers have been appointed, a contractor may also be a designer under this definition, and therefore Regulations 9 and 10 will apply to them in the same way as it does to the architect, engineer, etc.

3 DESCRIPTION OF PROJECT

The detail below is provided to assist the contractor but should be treated as preliminary information and not categorical.

3.1 Introduction and Background

The Greater Cambridge Partnership (GCP) is embarking on the provision of a network of cycling facilities to promote sustainable travel and health benefits within the county. The Greenways Routes will provide full and light segregation for pedestrians and cyclists from motorised traffic with the objective of encouraging less confident and younger cyclists to use this method of travel.

GCP have identified Horningsea Greenway as 'early works sections', which have been earmarked for early construction and delivery. The route is within the highway boundary, which is not subject to significant risks relating to design, lengthy consents, or buildability constraints. The extents can be found in figure 3.1 below.

Full Horningsea Greenway extents:

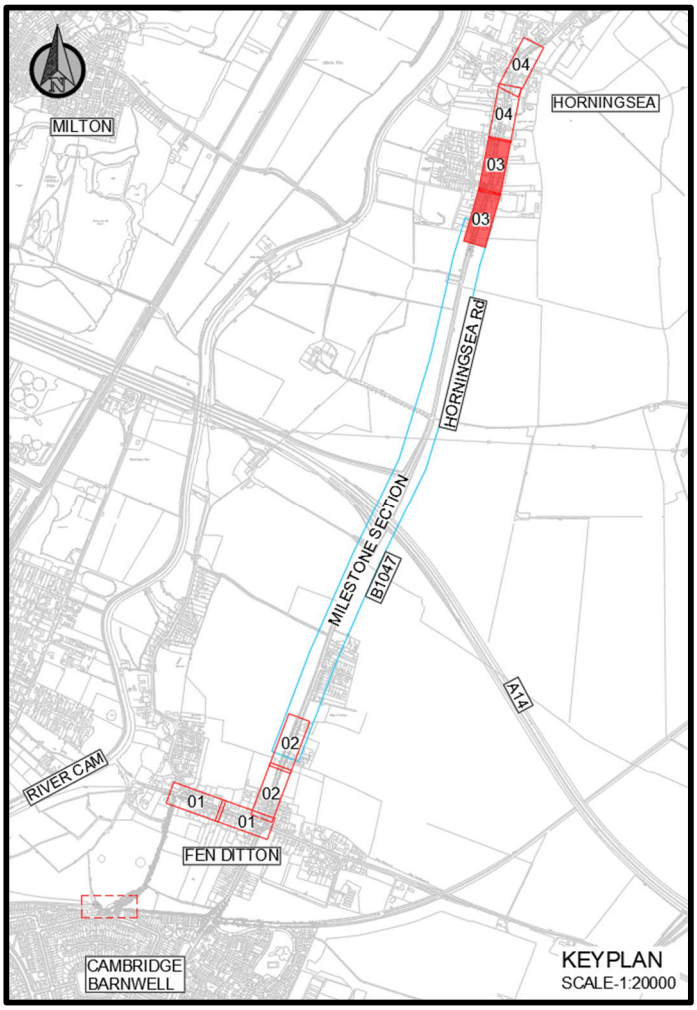


FIGURE 3-1 HORNINGSEA GREENWAY EXTENTS

3.2 Nature and Scope of the Work to be carried out

The early works sections along the Horningsea Greenway comprise of High Street and Horningsea Road within Horningsea village. These roads are crucial for the mobility of Horningsea as they represent the only

access to Horningsea from the South. Claythithe Road serves as the northern access to Horningsea from Waterbeach and ties directly to Horningsea High Street. This, together with the links to Fen Ditton and public rights of ways towards the River Cam presents a great opportunity for non-motorised travel in and out of Horningsea.

The works proposed include:

- Resurfacing of existing shared use paths on the southern approach of Horningsea.
- Widening of existing back of shared use paths where applicable to 3m wide in accordance with LTN 1/20.
- The provision of a transition buildout on the southern entry to Horningsea Village which offers safer transitions of cyclists on and off the shared use path onto the carriageway, and associated road markings and signage.
- Provision of road markings and signage to provide a 20mph speed zone within Horningsea village in the sections stipulated in figure 3.1.
- Provision of bolt-on modular buildouts along Horningsea High Street together with priority road markings to act as traffic calming measures while retaining the existing usable parking availability.
- Provision of cycle symbol road markings to increase the awareness of cyclists travelling on the carriageway on primary position.
- Maintenance of existing road markings along High Street, Horningsea Road and side roads through refreshing where applicable.
- Existing level checking around the proposed transition buildout to ensure an adequate long-fall towards the northern existing kerb inlet for surface water drainage. Should this be insufficient, alternative solutions including a combined kerb drainage system will be investigated.

3.3 Location of Early Works Project and Extent of Site



FIGURE 3-2 LOCATION OF EARLY WORKS AND EXTENTEN OF SITE

3.4 Existing Environment, Surrounding Land and its Use

The following list shows typical types of premises and their use around this construction site. This information must be considered when control measures are formulated for construction works, i.e. will the residents cause a hazard? Is a particular group of residents more at risk due to the construction works than others? Control measures required must be recorded in the method statements or safe systems of work documentation.

- ***Residential***

Dedicated space to be allocated for the contractor site compound and material storage area that does not impact the residents entering their homes. The development is in the close vicinity of residential areas for most of its length.

- ***Commercial / Office / Care home***

There are 3 commercial facilities within the extents of the development. While these are not within immediate vicinity of the works, care should still be taken to not impede beyond necessary the regular operation of these locals. The following are listed:

- Scotsdale's
- Plough & Fleece
- The Crown and Punchbowl.

- ***Existing Structures***

There are no above ground structures that WSP are proposing. It is the responsibility of the Contractor to ensure that the works do not negatively impact the existing metal rail, the wooden residence perimeter fence and residence brick wall.

Existing materials stored on site that may present a hazard.

None

- ***Ground Conditions / Contamination***

Not known

- ***Existing Utilities***

The term 'utility' means all underground services such as electricity, gas, water, storm water drain, foul sewer and telecommunication services. Buried utilities are widespread. It shall be assumed that they are present unless and until proven otherwise.

The exact location and depth of utilities must be verified using appropriate methods, **prior** to ground penetration by mechanical means at any location.

The location and depth of known existing utilities may be shown on the project utility drawings but are not limited to these drawings. Copies of these record drawings are to be provided to those needing them. It should be noted that the locations shown on the drawings may not be accurate and will always require on site verification.

Prior to commencing works on site, it shall be the responsibility of the Principal Contractor to satisfy himself that all utilities on site have been located, identified and marked, and disconnected or diverted as required, **prior** to commencing work in the particular area in question.

The C2 search (CAD Fusion Plan) has been carried out for this scheme and is readily available for the Principal Contractor if required. Trial hole investigations to be carried out by the Contractor prior to commencing works on site.

The contractors will record details of all changes that have been carried out during diversionary/installation works, details of any additional utilities not shown on the drawings, and of actual locations of utilities if different to that shown. This information shall be forwarded to the utility owner and to the Principal Contractor to be compiled as part of the 'as-built' drawings.

3.5 Project Program, Timescales and Phasing

- Proposed lead-in time (weeks): 4 weeks
- Envisaged Commencement Date: 4/12/2023
- Envisaged Completion Date: January 2024 (Milestone to confirm)
- Initial Notification to the HSE: TBC

The Principal Contractor shall confirm that the Works and associated phasing can be achieved within their actual programmed timescale, without prejudice to health and safety aspects of the contract.

- *Phasing of Works*

The Horningsea Greenway will be constructed in two phases consisting on the “Early Works” phase which focuses on Horningsea Road and High Street, and a subsequent phase for the remainder of the route in Fen Ditton.

3.6 Site Access, Compound, and Storage

- *Site Compound*

Initial potential locations of the site compound, area for materials storage and welfare facilities have already been identified by the Principal Contractor at the Concept Design Review Report. Final location shall be arranged and detailed in the Construction Phase (Health and Safety) Plan.

- *Site access*

The Principal Contractor shall determine details of safe access and egress, avoiding risk to others. Also refer to section 7 Traffic Management.

- *Storage and Distribution of Materials*

Materials, plant and equipment shall be stored with due regard to the risks posed to pedestrians, vehicle traffic and site personnel. Where the risk of interference is high, compounds shall be constructed to provide a secure enclosure.

Only the minimum quantity of hazardous substances will be permitted to be stored on site in properly constructed and labelled containers so as to reduce potential environmental impacts and possible harm. Appropriate methods of containment for accidental leakage shall be implemented (e.g. bunding of oil storage). Materials and spoil storage areas shall be detailed in the traffic management plan.

- *Temporary Services / Welfare Facilities*

The Principal Contractor shall provide and maintain appropriate welfare facilities. Details shall be provided in the Construction Phase (Health and Safety) Plan.

- *Traffic Management*

The Principal Contractor shall provide and maintain the traffic management required when carrying out the works. In areas of proposed footway widening, the contractor shall provide two-way signalised traffic control with one lane closure. Resurfacing and lining to be carried out under full road closures. Parking restrictions will also be required during these times. Temporary full road closures may also be required (subject to a temporary traffic order regulations) in areas where the proposed build out encroaches into the centreline, alternatives route indications to be provided by the Principal Contractor.

4 Interfaces

The Principal Contractor shall, both prior to and during the work activities, identify any issues where other parties may interface with the work activity. Co-operative measures will be introduced to ensure that such interfaces do not import risk.

The following interfaces have been identified:

Reference No.	Description	Comment
Local Authority	Cambridge County Council (CCC)	The Client and highway authority
Water Authority	Anglian / Cambridge Water	Water supply, foul and surface water sewers
Gas Authority	Cadent	Gas supplier
Electrical Supply Authority	UK Power Networks	Electrical distribution in vicinity
Communications Authority	BT / Virgin Media / Vodafone	Telecoms in vicinity
Fire Authority	Cambridgeshire Fire & Rescue Service	Cambridge Fire Station to utilise Horningsea Road as access to Horningsea.
Buses	Cambridge County Council	Bus routes 19
Hospital	Addenbrooke's Hospital	Horningsea Road will provide a key link for ambulances to the hospital

In the event of a utilities failure, local authorities are responsible for working with the distribution company who brings the supply and health service providers to identify vulnerable people who are directly affected Please refer to section 9.4 for contact details.

5 Existing Drawings & Reports

Drawing Number	Title	Originated from	Rev/Date
3562-WSP-HS-XX-DR-CV-250103	GENERAL ARRANGEMENT - SHEET 03 OF 04	WSP	P01/14.11.2023
3562-WSP-HS-XX-DR-CV-250104	GENERAL ARRANGEMENT - SHEET 04 OF 04	WSP	P01/14.11.2023
3562-WSP-HS-XX-DR-CV-251203	PROPOSED TRAFFIC SIGNS AND ROAD MARKINGS - SHEET 03 OF 04	WSP	P01/14.11.2023
3562-WSP-HS-XX-DR-CV-251204	PROPOSED TRAFFIC SIGNS AND ROAD MARKINGS - SHEET 04 OF 04	WSP	P01/14.11.2023
3562-WSP-HS-XX-DR-CV-251205	PROPOSED TRAFFIC SIGNS DETAILS	WSP	P01/14.11.2023
3562-WSP-HS-XX-DR-CV-251206	PROPOSED TRAFFIC SIGNS DETAILS	WSP	P01/14.11.2023
3562-WSP-HS-XX-DR-CV-251207	PROPOSED TRAFFIC SIGNS SCHEDULE	WSP	P01/14.11.2023
3562-WSP-HS-XX-DR-CV-050900	STANDARD DETAILS	WSP	P01/14.11.2023
3562-WSP-HS-XX-DR-CV-025950	TYPICAL CONSTRUCTION DETAIL	WSP	P01/14.11.2023
3562–WSP–HS–XX–DR–CV-100001	TRO PROPOSED 20MPH ZONE FEN DITTON HIGH ST	WSP	P01/13.09.2023

3562–WSP–HS–XX–DR–CV-100002	TRO PROPOSED 20MPH ZONE HORNINGSEA ROAD - HIGH ST	WSP	P01/13.09.2023
3562–WSP–HS–XX–DR–CV-100003	TRO PROPOSED PARALLEL CROSSING FEN DITTON	WSP	P01/13.09.2023
3562–WSP–HS–XX–DR–CV-100006	TRO PROPOSED 30MPH BUFFER ZONE HORNINGSEA ROAD	WSP	P01/13.09.2023

6 RESTRICTIONS AFFECTING THE PROJECT

There are many restrictions that may affect the Works on this project, some of which may only exist during particular phases of the work. The Contractors shall identify all restrictions and the details of methods of work required to avoid conflict with them shall be recorded in the Construction Phase (Health and Safety) Plan.

Please see attached the Designers Risk Register and Design Risk Management for the full list of risks in this project:
T446 - Horningsea Design Risk Management Schedule

6.1 Potential Restrictions

The following is a non-exhaustive list of potential restrictions that may occur. Particular restrictions relevant to the Works shall be identified during the risk assessment process.

- Hours of work e.g. exam periods;
- Maintenance of vehicular (including emergency services) routings and pedestrian access;
- Program e.g. windows for closure of road/utility/canal etc.;
- Environmental issues e.g. to do with construction processes required; contaminated land or materials to be removed;
- Hot works may be restricted due to adjacent premises. This should be reflected in the hot works permit system used on the site.

6.2 Identified Restrictions

The following restrictions have been identified, and apply to this contract:

- *Restrictions on Access*
  - As mentioned on section 3.2, Horningsea Road and High Street are essential for the access of Horningsea and mobility within. As such, the Principal Contractor should identify ways to minimise the disruption to traffic flows along the area of work where applicable.

See section 7 for Traffic Management information

- *Restrictions on the Work Site*

Caution should be given to avoiding conflict with users of road during construction period. Road closures may be required during island and footway buildout construction.

Throughout the course of early works construction phase, access to driveways must be maintained.

Risks to be cautious about:
- Electrocution, due to digging above shallow services.
- Materials to be hand excavated in close proximity to existing gas mains to avoid any fracture of existing pipes.
- Caution to be taken when excavating near existing hedgerows to avoid striking the hedgerow roots.

C2 stats plans report to be provided to Principal Contractor. Take precaution before excavating, follow safe systems of excavation and ensure trial holes and/or safe digging practices are always adopted.

Prior to commencing works on site, it shall be the responsibility of the Principal Contractor to satisfy himself that all utilities on site have been located, identified, disconnected, and diverted as required, **prior** to commencing work in the area.

Underground electrical distribution, low pressure gas, water, sewage and telecoms are present in the worksite. The Principal Contractor should be aware of the following statutory undertakers' equipment and take appropriate precautions.

Several Anglian and Cambridge Water manholes within the scheme extents with a foul and surface water sewer trunk running through the entire length of the work site.

No information has been made available on existing drainage infrastructure at the time of design and therefore it should be confirmed through as-built drainage drawings or existing records. Should this information not be available, WSP, as Principal Designer, recommends CCTV surveys to be performed to obtain accurate data on the existing drainage system

Four traffic bolt-down buildouts have been proposed along the carriageway on High Street in Horningsea village. While utilities run underneath these proposals, the Redipave modules indicated in the Standard Details drawing provide a surface solution requiring minimal groundworks, thus not affecting any utility.

Plans have been supplied by utilities companies showing the approximate location of their apparatus has been passed to the Principal Contractor.

- *Restrictions on Working Hours*

Normal working hours will be as set out in the contract documents.
Works shall comply with the conditions and restrictions contained within the directions issued from time to time by the associated local authorities, together with any additional restrictions contained within the contract document.

- *Environmental impacts*

The Contractor shall use his best endeavours to reduce potentially adverse environmental impacts so far as reasonably practicable. Actions to achieve this shall include:

- Minimizing noise, dust and vibration from work activities
- Minimizing waste and re-using materials where practicable
- Minimizing the effect of disturbance on mature trees
- Segregation and controlled disposal of special waste
- Appropriate standards of behaviour by on-site personnel
- Minimizing mud on the highway
- Other environmental impacts that are identified throughout the works shall be assessed by the contractor for adequacy of controls as they arise

- *Noise / Dust / Vibration*

The Contractor shall ensure noise/dust/vibrations are kept to a minimum. The Principal Contractor shall determine methods and processes of monitoring and control. This shall be detailed in the Construction Phase (Health and Safety) Plan.

Noise emissions on site shall comply with BS 5228 Noise Control on Construction Sites. The Principal Contractor is to ensure that overall noise levels are maintained at an acceptable level, particularly during night time working in residential areas.

7 TRAFFIC MANAGEMENT

7.1 A traffic management plan to ensure safe movements and interactions between vehicles and pedestrians, both on and adjacent to the site shall be complied with by the contractor. It shall cover all expected work activities, delivery and storage areas, and it shall be expanded and / or amended to cover new or altered activities as they arise.

7.2 The Principal Contractor shall produce a detailed traffic management plan required for this work in accordance with the contract document for inclusion in the Construction Phase (Health and Safety) Plan.

7.3 The traffic management plan shall also provide for the requirement that the entrances and roads are kept clean and clear of obstructions, and prevent the spillage or deposit of clay, rubble or other debris on the entrance and other roads throughout the contract period.

7.4 The Principal Contractor shall be responsible for the design and implementation of all traffic safety management arrangements within the site and any affected areas outside of the site. He shall also be responsible for all associated consultations and for obtaining the necessary approvals for the arrangements.

7.5 It is the Principal Contractor's responsibility to ensure that the traffic management plan is acceptable to the local authority responsible for the road in question.

8 SITE WIDE ELEMENTS

The following health and safety issues relate to the site wide elements for which control measures are required by the Principal Contractor.

8.1 Site Welfare Facilities

The Principal Contractor shall provide in accordance with the CDM Regulations Schedule 2. These shall be maintained and upgraded as necessary throughout the duration of the contract.

8.2 Co-ordination of Traffic/Pedestrians

The Principal Contractor shall ensure that pedestrians and traffic are segregated so far as reasonably practicable on the site.

8.3 Site Access/Egress Points

The Principal Contractor is responsible for controlling access and egress to the site.

8.4 Removal of debris/rubble etc

The Principal Contractor shall arrange for regular removal of rubbish to authorised tips.

8.5 Emergency Vehicle Access

Access will be required to adjacent properties at all times.

8.6 Storage Area

The Principal Contractor shall arrange for safe storage of all materials on the site.

8.7 Delivery and positioning of plant, equipment, and materials

The Principal Contractor is responsible for planning and organising the positioning and movement of plant, equipment and materials across the site.

8.8 Identification and removal of any hazardous material

Known hazards are described in this document, but other hazards may arise during the works. The Principal Contractor shall assume that all unknown materials discovered are potentially hazardous, and seek advice before continuing. The Principal Contractor is responsible for arranging the safe removal and disposal of all such materials.

9 COMMUNICATION

Ongoing communication between all parties is a key element to maintaining safety. Any information that is relevant to other parties should be shared. If in doubt, tell all other parties.

The Principal Contractor shall arrange meetings at regular intervals (as appropriate to the stage of the works) to discuss issues that affect safety. Any (major) design changes should be discussed at these meetings.

9.1 Concerns

Current concerns in relation to health, safety or welfare shall be communicated directly between the contractors and the Principal Contractor/Site Safety Manager. Ongoing concerns will be communicated through the site meetings.

9.2 Audit of Processes

The Principal Contractor will undertake planned site safety inspections to supplement those undertaken by the Contractor's personnel. The frequency and timing of inspections will be determined by the level and nature of work activity.

Inspections shall include a sample audit of standards of safety management processes undertaken by the Principal Contractor in compliance with this plan.

9.3 Site Inspections

The Principal Contractor is responsible for conducting site inspections to ensure that safe working practices are maintained. Records shall be kept of the inspections.

An agreed schedule of inspections shall be included in the Construction Phase (Health and Safety) Plan.

9.4 Contact List

Role	Duty Holder	Contact Person	Position	Contact Details
Client	Cambridgeshire County Council (GCP)	Ben Hathway / Pamela Hawkins	-	New Shire Hall Emery Crescent Enterprise Campus, Weald, Huntingdon PE28 4YE Ben.Hathway@cambridgeshire.gov.uk Pamela.Hawkins@cambridgeshire.gov.uk
Principal Designer	WSP	WSP	-	Charter House, 64-66 Hills Road, Cambridge CB2 1LA

Role	Duty Holder	Contact Person	Position	Contact Details
Principal Contractor	Milestone Infrastructure	Dan Woods	-	Adamson House, Towers Business Park, Wilmslow Rd, Didsbury, Manchester M20 2YY dan.wood@milestoneinfra.co.uk

9.5 **Additional Project Contacts**

Role	Contact Person	Position	Contact Details
None			

9.6 Records

When requested, the Principal Contractor shall provide, or make available for inspection any information regarding health, safety or welfare on the project. Such information may include:

- Accident/incident statistics and normalizing data
- Accident/incident reports
- Site safety reports
- Method statements
- Details on the implementation of the Construction Phase (Health and Safety) Plan
- HSE communications

9.7 Display of Notices

The following list gives the Principal Designer's recommendations for notices to be displayed prominently in the site offices:

- Notification to the HSE – F10 (rev) form (mandatory to display)
- The major accident / emergency plan
- Emergency procedures and contact numbers
- The site rules
- Hazard warning signs
- Access restriction signs/pedestrian and traffic routing

9.8 Re-design Work, New Design Work

The Principal Contractor shall inform the Principal Designer of any proposed re-design or new elements of design required **before** that particular work package commences.

10 HEALTH & SAFETY FILES

10.1 Existing Health & Safety File

There are no existing health and safety files relevant to these works.

10.2 Developed Health and Safety File for this Project

Throughout the pre-construction phase of the project the Principal Designer will commence the Health and Safety File, all contractors and designers are responsible for ensuring that all their relevant information for the Health and Safety File is prepared and handed over to the Principal Designer for inclusion in the File. Similarly, the Principal Contractor shall forward any relevant information he possesses to the Principal Designer for inclusion in the Health and Safety File. The Principal Designer will pass the completed Health and Safety File to the Client at completion of the project. However, if the Principal Designer's appointment ends before the project completion, he will pass the partially completed file to the Principal Contractor and the Principal Contractor will be responsible for completion of the File and its onward transmission to the Client.

Information contained in the file needs to include that which will assist persons carrying out construction work on the structure at any time after completion of the current project and could include:

- Drawings, calculations and plans used and produced throughout the demolition and construction process along with the design criteria.
- General details of the construction methods and materials used.
- Details of the structure's equipment and maintenance facilities
- Maintenance procedures and requirements for the structure
- Details of the location and nature of utilities/services and their maintenance/isolation, including emergency and fire-fighting systems, equipment, routes, procedures etc.
- Details of hazardous substances and safety data sheets
- Load bearing details – retaining walls, piling, floors, walls, trusses and thrust blocks etc.
- Foundations, crane bases, etc.
- Archaeological data relating to health and safety issues.

All information shall be provided both in hard copy and electronically (e.g. CD ROM or DVD). Initial "red line" drawings will be accepted provided these are legible, and will be replaced by CAD drawings within a reasonable timescale. Drawings at A3 size are preferable and must be legible.

Electronic format must utilise common packages such as Microsoft Word and Excel (but not Access). Drawings and other scanned documents shall be in pdf format, and not in any CAD format (e.g. DWG).

11 EMERGENCY ARRANGEMENTS

11.1 First Aid

A first aid box must be provided in the main site office, and at all mobile sites.

The Principal Contractor will be responsible for ensuring that the contents are replaced as necessary. The name of the First Aiders and the location of the first aid box are to be posted in the mess room/canteen.

11.2 First Aid, Fire Fighting and Emergency Arrangements

The Principal Contractor shall assess the site to determine the first aid and fire fighting requirements.

11.3 Emergency Assistance

The following are suggestions for telephone numbers and action plans to be displayed on the site notice board.

- Emergency telephone numbers
- Major accident - emergency plan
- Major fire/explosion – emergency plan
- On discovering a fire

11.4 Reporting of Accidents and Dangerous Occurrences

Accident reporting arrangements between the Principal Contractor, the HSE and Client are to be developed and included in the Construction Phase (Health and Safety) Plan.

All accidents **MUST** be reported to the Principal Contractor for inclusion in the accident book. Any RIDDOR (Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013) reportable accidents/dangerous occurrences will be investigated and a report submitted to the Health and Safety Executive by the Principal Contractor, as required.

The Contractor shall ensure that all current legislation with particular reference to the Health & Safety at Work etc. Act 1974 is implemented in spirit as well as the letter of the law.

12 Specific Site Rules

Establish and display clear rules and procedures for all visitors to the site. The principal contractor will be required to provide detailed site rules within the Construction Phase (Health and Safety) Plan in addition to those specified by the client, based on his own judgement of the project. These should include:

- Training & Site induction
- Accident reporting
- Personal protective equipment
- Permits to Work

12.1 Client Site Rules

The following rules will be incorporated by the Principal Contractor into the Construction Phase (Health and Safety) Plan (a copy of which shall be kept on site at all times):

- Tools, materials etc. are not to be left unattended.
- All waste must be stored in covered skips. No waste is to be burned on the site.
- The playing of radios, personal CD players etc. will not be permitted.
- Smoking will only be allowed in designated areas.
- There will be no horse play.
- Safety helmets and safety boots will be worn at all times.

13 THE DESIGN

13.1 Construction and Hazardous Materials

- *Substances Hazardous to Health – during construction*

The Principal Contractor shall continually monitor the project and ensure that substances hazardous to health are identified, along with the appropriate control measures.

Material safety data sheets shall be obtained for all substances hazardous to health in use as part of this project. All Contractors shall ensure the method of work, storage and disposal of this material is compatible with the requirements stated in the data sheet, and industrial best practice. A method statement shall be prepared, used and kept for the materials/substances in use.

- *Substances Hazardous to Health – during use of building or future maintenance / construction work*

The Principal Contractor shall ensure that material safety data sheets are obtained for all substances hazardous to health, which are to be installed, or are discovered in the structure as part of this project, for inclusion in the Health and Safety File.

- *Potential Substances and Materials that may be present.*

The following list is a non-exhaustive list of substances and materials that may be present:

- Lead paint
- Asbestos
- Sharps
- Hazardous substances (dusts, solvents, gases, acids, alkalis, etc.)
- Biological agents
- Contaminated water course or soil
- *Table of Substances and Materials identified at this stage.*

Material / Substance	Use / Location	Alternatives considered.
None	None	None

Please also refer to section 13.1.1 above.

13.2 **Construction Risk Management**

It is the policy of the client to attach the greatest importance to health and safety of all persons employed on the project, and directly affected by the works. The project will be constructed, so far as is reasonably practicable, in such a way that the risk to health and safety of all persons engaged in, or affected by its construction, use, maintenance and demolition are eliminated or reduced to an acceptable level under current health and safety legislation and good practice.

Method statements must be developed by the Principal Contractor and Contractors to manage and control hazards identified, see section 13.4 for those identified to date. The Principal Contractor and contractors must carryout additional risk assessments and develop method statements as necessary throughout the duration of the project. The resultant method statements or safe systems of work should be documented.

The method statement provided must:

- Inform the reader of the task and the associated risks.
- Inform the reader of what precautions are to be taken when faced with those risks.
- Inform the reader of who will provide those precautions.
- Inform the reader of the necessary plant, materials and equipment that must be utilised.

It is important that unplanned situations or activities that have not been previously assessed, but that may give rise to risk, are assessed before work is started.

13.3 Construction Risks - Summary

The following is a summary of the type of risk activity associated with this project.

- Excavation work: for the installation of the transition buildout and the widening of the shared use path.
- Conflict with the public: Contractor to design out a method statement and material storage plan prior to works commencement. Working areas to be fenced-off to avoid clashes with pedestrians always ensuring off-street premises access. Maintain a minimum of 1.2m free width footway at all times. Safety barriers to be in place before works commence.
- Work next to live traffic: Temporary road closures through temporary traffic order regulations will be applied for in order to mitigate the risk of personnel working adjacent to live traffic.
- Interfaces with existing utility apparatus: C2 searches undertaken however neither GPR survey nor trial holes have been progressed. Contractor to adopt safe working methods in line with HSG47 HSE Avoiding Danger From Underground-Services. This involves the need to detect underground services and contact utilities companies before digging. Additionally, the contractor should also adopt working methods in line with GS6 - Avoiding danger from overhead power lines to ensure appropriate safety working measures around are in place overhead cables present on site.
- Conflict with private driveways/access roads: The Principal Contractor will ensure suitable access is maintained for pedestrian routes and driveways to minimise conflict.

The following health and safety issues have not yet been resolved and control measures are required from the Principal contractor/Contractor.

- Working around utility services equipment

The T446: Design Risk Management Schedule and a C3 response summary can be found on the Appendix.

13.4 Significant Design Assumptions

Two design assumptions have been made:

- The four buildouts located on High Street will be of the proprietary bolt down type to reduce the exposure of the workforce to live traffic. These will also be installed under temporary full road closures during in a quick turnaround as ensure by the supplier.
- Temporary traffic order regulations for temporary road closures will be requested to install the number of buildouts as these encroach into the centreline of the carriageway, while temporary traffic signals should be used to carry out the widening works on the existing shared use path on Horningsea Road.

14 ATTACHMENTS

Statutory Undertakers apparatus location plans sent as a downloaded link.

15 APPENDIX

T446: Design Risk Management Schedule

Project No	70113562	Project Name	Cambs JPSF - Horningsea Greenway Detailed Design (Northern Section ONLY)

Guidance Notes (see guidance notes page for more details)

Design risk management should be an integral part of the overall design development and designers should think of it in terms of considering constructability, maintainability, etc. Designers only need to document their consideration of risks in this simple risk management schedule format. There is no requirement for quantitively design risk assessments to be carried out/documented and these should be avoided

* Risks should be considered in a logical sequence relating to the location/operational environment, constructability/installability, operability (normal/emergency), maintainability (Inc. routine cleaning, replacement, etc.), and alteration/decommissioning/dismantling/demolition, and should be categorised against those headings,

CIRIA guidance documents C755, C756, C686, C607, etc. provide a useful checklist and detailed guidance on the identification of risks to be considered during design and how those risks might be addressed - see detailed guidance notes for more details

§ Significant residual risks are those which are unusual, not obvious, difficult to manage, or where critical design assumptions apply. The documentation by designers of residual risks that cover well-known and understood hazards should be avoided.

Ref	Risk Category* & Phase where appropriate, e.g. location/environment, construction, operation, maintenance, alteration/demolition	Work Element/Location (where appropriate)	Hazard or Risk Issue Identified	Risk Management Owner	Design Eric Action Required (e.g. hazard elimination/risk mitigation action, information to be provided to others)	Significant Temporary Works Requirements/Management Arrangements and/or any Special Erection/Installation Sequences or Requirements	Design Action Status/Final Resolution Notes (e.g. traceability of Eric action, communication of significant residual risk, critical design criteria, etc.)	Significant Residual Risk	Date Logged/ Reviewed	Raised By
1	Construction	All	Private driveways/ businesses being inaccessible during the scheme's construction	Designer/Contractor	Access to driveways/ businesses to be provided at all times it is required. Suitable pedestrian routes to be provided to minimise potential for conflict between workforce, site visitors and plant movements. Early liaison with residents, businesses and all affected parties required in order to discuss phases of the works and access requirements.		Access to driveways/ businesses to be provided at all times it is required. Suitable pedestrian routes to be provided to minimise potential for conflict between workforce, site visitors and plant movements. Early liaison with residents, businesses and all affected parties required in order to discuss phases of the works and access requirements.	Yes	22/03/2023	Bogusia Day
2	Operation	All	Risk or injury to users of Greenways owing to potential conflict between cyclists/pedestrians during operation (i.e. on completion of works)	Lead Designer	Designer to take advice from cycling groups and adopt best practice. Compliance with design standard LTN 1/20 where possible - departures to be agreed with GCP and signed off.	None	Monitor and evaluate success through post completion RSA	Yes	22/03/2023	Bogusia Day
3	Construction/Operation/Maintenance	All	Risk of injury to Greenway users owing to defects developing in surfacing	Lead Designer	Materials to be designed/specified in accordance with HERCS and LTN1/20 - sealed surface preferable for rural sections of route.	Arrangements for safe access for maintenance plant to be considered - e.g. removable bollards	materials as per HERCS 2023	Yes	10/11/2023	Aitana Calvo Cousins
4	Demolition, Construction	All works	Injury to trespassers from onsite construction works, equipment and excavated areas	Principal Contractor	Hoarding/ fencing off of site and security measures such as scaffolding, detectors and CCTV where relevant	Safety barriers to be in place before works commence	Principal Contractor to provide suitable fencing and protection to the works site at all times	Yes	22/03/2023	Bogusia Day
5	Construction	Traffic Management	conflict between construction work and public	Contractor	Contractor to have a method of statement, and a material storage plan prior works commence. All working areas to be buried to avoid clashes with pedestrians, always ensuring off-street premises access. Maintain a minimum of 1.2 m free width footway at all times.	Safety barriers to be in place before works commence	Contractor to monitor barriers are in place once works commence and follow construction and storage plans. Contractor to keep working areas tidy to reduce H&S hazards.	Yes	22/03/2023	Bogusia Day
6	Operation	All works	Pedestrian / user access and circulation to take into account slopes for risk of slips, trips and falls	Principal Designer	Access and circulation routes designed to avoid steep slopes. Allow for level landings on graded routes inline with accessibility/DDA/inclusivity guidance.	Safety barriers to be in place before works commence	Gradients checked during detail design and it has been ensured that grading does not exceed 1:12	Yes	22/03/2023	Bogusia Day
7	Construction	Traffic Management	in order to construct the Build out safely and to avoid conflict with live traffic and pedestrians - temporary road closure would have to be provided	Contractor	Temporary traffic order regulation to be applied for road closure		TTRO to be applied for	Yes	13/11/2023	

Issue 3.1

Document & Drawing Issue Sheet

Project No:	70113562	Issue No: 1	
Project Name:	Horningsea Greenway - Detailed Design	Issuing Office:	
Date of Issue:	14-Nov-2023	62-64 Hills Road, Cambridge,	
Purpose of Issue:	For Approval	CB2 1LA	
Method of Issue	Email	Tel: +44 (0)1223 558050	
Number of items Issued:	13	wsp.com	
Format of Issue:	PDF		
Service:	CIVILS		

Issued to:	No of Recipients: 4	
Company	Name	Position/Function
GCP	Ben Hathway	Project Manager
GCP	Pamela Hawkins	Assistant Project Manager
Milestone Infrastructure	Dan Wood	Contract Manager
Milestone Infrastructure	Dan Arnold	Site Agent

Dwg/Doc Number	Title	Scale	Size	Revision
3562-WSP-HS-XX-DR-CV-250103	GENERAL ARRANGEMENT - SHEET 03 OF 04	1:250	A1	P01
3562-WSP-HS-XX-DR-CV-250104	GENERAL ARRANGEMENT - SHEET 04 OF 04	1:250	A1	P01
3562-WSP-HS-XX-DR-CV-251203	PROPOSED TRAFFIC SIGNS AND ROAD MARKINGS - SHEET 03 OF 04	1:250	A1	P01
3562-WSP-HS-XX-DR-CV-251204	PROPOSED TRAFFIC SIGNS AND ROAD MARKINGS - SHEET 04 OF 04	1:250	A1	P01
3562-WSP-HS-XX-DR-CV-251205	PROPOSED TRAFFIC SIGNS DETAILS	1:250	A1	P01
3562-WSP-HS-XX-DR-CV-251206	PROPOSED TRAFFIC SIGNS DETAILS	1:250	A1	P01
3562-WSP-HS-XX-DR-CV-251207	PROPOSED TRAFFIC SIGNS SCHEDULE	1:250	A1	P01
3562-WSP-HS-XX-DR-CV-050900	STANDARD DETAILS	1:250	A1	P01
3562-WSP-HS-XX-DR-CV-025950	TYPICAL CONSTRUCTION DETAIL	1:250	A1	P01
3562–WSP–HS–XX–DR–CV-100001	TRO PROPOSED 20MPH ZONE FEN DITTON HIGH ST	1:1000	A1	P01
3562–WSP–HS–XX–DR–CV-100002	TRO PROPOSED 20MPH ZONE HORNINGSEA ROAD - HIGH ST	1:1000	A1	P01
3562–WSP–HS–XX–DR–CV-100003	TRO PROPOSED PARALLEL CROSSING FEN DITTON	1:500	A1	P01
3562–WSP–HS–XX–DR–CV-100006	TRO PROPOSED 30MPH BUFFER ZONE HORNINGSEA ROAD	1:1000	A1	P01

PROPOSED SIGN TO DIAG 517
TO BE MOUNTED ON EXISTING LAMP COLUMN. EXACT LOACTION TO BE CONFIRMED ON SITE WITH CCC ENGINEER.
REF HS20

EXISTING SIGN TO DIAG 575 & "ONCOMING VEHICLES IN MIDDLE OF ROAD" SUPPLEMENTARY PLATE TO BE RETAINED

EXISTING 30MPH REINFORCEMENT SIGN TO BE REMOVED & REPLACED WITH PROPOSED REPEATER SIGNS TO DIAG 670 (20MPH) TO BE MOUNTED BACK TO BACK ON EXISTING LAMP COLUMN. EXACT LOACTION TO BE CONFIRMED ON SITE WITH CCC ENGINEER.
REF HS22 & HS23

PROPOSED BOLLARD WITH KEEP RIGHT ARROW TO DIAG 610
REF HS25

FOR CONTINUATION REFER TO DRG. 3562-WSP-HS-XX-DR-CV-251207

HIGH STREET

DIAG 1003A
DIAG 1023A
DIAG 1004
DIAG 1024
SLOW
DIAG 1023A
DIAG 1003A
DIAG 1004

PROPOSED BOLLARD WITH KEEP RIGHT ARROW TO DIAG 610
REF HS21

PROPOSED SIGN TO DIAG 517
REF HS24

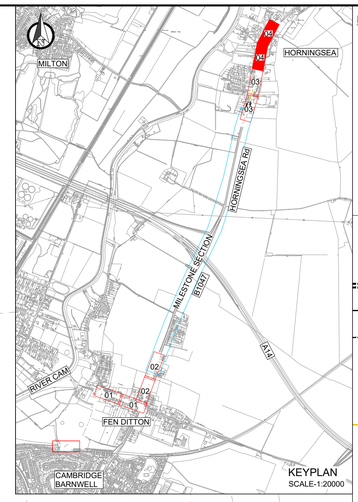
LIMIT OF WORKS

EXISTING SIGN TO DIAG 547.2
TO BE RETAINED

EXISTING 30MPH REINFORCEMENT SIGN TO BE REMOVED

FOR CONTINUATION SEE BELOW

0 1:250 12.5 metres



KEY

- PROPOSED SIGN
- EXISTING SIGN TO BE TAKEN DOWN AND REMOVED FOUNDATION TO BE BROKEN OUT AND LEVELLED TO FORMATION LEVEL
- EXISTING SIGN TO BE RETAINED AND PROTECTED FOR THE DURATION OF THE WORKS
- EXISTING SIGN PLATE TO BE RELOCATED
- PROPOSED BOLLARD
- PROPOSED KERBLINE

DIA REF	WIDTH (m)	COLOUR	LENGTH (m)	GAP (m)
1003A	0.200	WHITE	6.000	3
1004	0.100	WHITE	4.000	2
1009A	0.100	WHITE	0.600	0.300
1023A	1.250	WHITE	3.750	N/A
1057	0.750	WHITE	1.215	N/A
1018	0.075	YELLOW	N/A	N/A
1065	N/A	WHITE	4.300	N/A
1024	1.6	WHITE	N/A	N/A
1003	0.2	WHITE	N/A	1
1012.1	0.15	WHITE	N/A	N/A
1049	0.15	WHITE	N/A	N/A
1059	N/A	WHITE	1.000	N/A

NOTES

1. ALL DIMENSIONS ARE IN METRES UNLESS STATED OTHERWISE
2. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL RELATED DOCUMENTATION AND STANDARD DETAILS.
3. CONFLICTING INFORMATION SHOWN ON THE ENGINEER'S DRAWINGS OR DISCREPANCIES BETWEEN THE INFORMATION GIVEN BY THE DESIGNER AND THAT PROVIDED BY OTHERS MUST BE REFERRED TO THE DESIGNER BEFORE THE WORKS COMMENCE.
4. ALL TRAFFIC SIGNS AND ROAD MARKINGS TO BE IN ACCORDANCE WITH THE TRAFFIC SIGNS REGULATIONS AND GENERAL DIRECTIONS (TSRGD) 2016 AND CHAPTERS 1,3,4 & 5 OF THE TRAFFIC SIGNS MANUAL(TSM).
5. ALL ROAD MARKINGS TO BE THERMOPLASTIC MATERIAL IN ACCORDANCE WITH BS EN 1871 AND HAVE CLASS S3 SKID RESISTANCE IN ACCORDANCE WITH BS EN 1436. ALL WHITE ROAD MARKINGS TO HAVE REFLECTORISED GLASS BEADS IN ACCORDANCE WITH BS EN 1423 & BS EN 1424.
6. ROAD MARKINGS TO BE APPLIED USING THERMOPLASTIC PAINT AND SHALL ACHIEVE A MINIMUM 55 PSV UNLESS OTHERWISE STATED / AGREED IN WRITING WITH THE ADOPTING AUTHORITY.
7. WHEREVER PRACTICABLE SIGNS SHALL BE ERECTED/MOUNTED ON OTHER STREET FURNITURE (EG: LAMP COLUMNS) IN ORDER TO MINIMISE CLUTTER, AS INDICATED ON THE LAYOUT AND SIGNAGE SCHEDULE.
8. PRIOR TO EXCAVATION AND POURING OF ASSOCIATED FOUNDATIONS, THE CONTRACTOR SHALL AGREE THE FINAL LOCATIONS OF ALL SIGNS AND STREET FURNITURE WITH THE ADOPTING AUTHORITY.

REV	DATE	BY	DESCRIPTION	CHK	APD
P01	10/11/23	AS	ISSUE FOR CONSTRUCTION APPROVAL		

DRAWING STATUS
S4 - FOR APPROVAL

62-64 Hills Road, Cambridge, CB2 1LA, UK
T +44 (0) 1223 558 050, F +44 (0) 1223 558 051
www.wsp.com

CLIENT
GREATER CAMBRIDGE PARTNERSHIP

PROJECT
HORNINGSEA GREENWAY DETAILED DESIGN

TITLE
PROPOSED TRAFFIC SIGNS & ROAD MARKINGS
SHEET 04 OF 04

SCALE @ A1	DATE	DESIGN/DRAWN	CHECKED	APPROVED	SHEET
1:250	29/03/2023	AS	AKM	ACC	A1

WSP PROJECT NO.
70113652

DRAWING No.
3562-WSP-HS-XX-DR-CV-251204
REV.
P01

PROPOSED SIGNS TO DIAG 674 (20MPH ZONE) & 675 (30MPH/20MPH ZONE ENDS) MOUNTED BACK TO BACK
REF HS28 (674) & HS29 (675)

ST JOHN'S LANE

PROPOSED SIGNS TO DIAG 674 (20MPH ZONE) & 675 (30MPH/20MPH ZONE ENDS) MOUNTED BACK TO BACK
REF HS30 (674) & HS31 (675)

PROPOSED SIGNS TO DIAG 674 (20MPH ZONE) & 675 (30MPH/20MPH ZONE ENDS) MOUNTED BACK TO BACK
REF HS33 (674) & HS34 (675)

DOCK LANE

EXISTING SIGNPOST TO BE REMOVED & REPLACED WITH PROPOSED SIGNS TO DIAG 674 (20MPH ZONE) & 675 (30MPH/20MPH ZONE ENDS) MOUNTED BACK TO BACK & DIAG 816.
REF HS35 (674), HS36 (675) & HS41 (816)

PROPOSED SIGNS TO DIAG 674 (20MPH ZONE) & 675 (30MPH/20MPH ZONE ENDS) MOUNTED BACK TO BACK
REF HS37 (674) & HS38 (675)

EXISTING PUB SIGN TO BE RETAINED

EXISTING 30MPH REINFORCEMENT SIGN TO BE REMOVED FROM LAMP COLUMN

LIMIT OF WORKS

DIAG 1023A
DIAG 1004
DIAG 1009A
DIAG 1003A
DIAG 1003A
DIAG 1023
DIAG 1004
HIGH STREET
DIAG 1004
DIAG 1009A
DIAG 1023A
DIAG 1003A

HIGH STREET

LIMIT OF WORKS

DIAG 1024
SLOW

FOR CONTINUATION SEE ABOVE

PROPOSED BOLLARD WITH KEEP RIGHT ARROW TO DIAG 610
REF HS32

PROPOSED SIGNS TO DIAG 674 (20MPH ZONE) & 675 (30MPH/20MPH ZONE ENDS) MOUNTED BACK TO BACK
REF HS39 (674) & HS40 (675)

UNTIL TECHNICAL APPROVAL HAS BEEN OBTAINED FROM THE RELEVANT LOCAL AUTHORITIES OR STATUTORY BODIES, IT SHOULD BE UNDERSTOOD THAT ALL DRAWINGS ARE ISSUED AS PRELIMINARY AND NOT FOR CONSTRUCTION. SHOULD THE CONTRACTOR AND / OR EMPLOYER COMMENCE WORK PRIOR TO APPROVAL BEING GIVEN, IT IS ENTIRELY AT THEIR OWN RISK

0 1:250 12.5 metres

C:\Users\ukxxn106\WSP 0365\70113562 - Horningsea Greenway detailed Design - Documents\03 WSP\Civil Engineering\03 Drawings\3562-WSP-HS-XX-DR-CV-251200.dwg 14 Nov, 2023 - 12:48pm

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CAUTION TO BE TAKEN WHEN CONSTRUCTING FULL-DEPTH SHARED USE PATH IN IMMEDIATE VICINITY OF HEDGEROW ROOTS

NEW FULL-DEPTH CONSTRUCTION TRENCH TO BE HAND-EXCAVATED NEXT TO HEDGEROW ROOTS

PROPOSED QUIET STREET ENVIRONMENT

PROPOSED 20MPH SPEED LIMIT ON HORNINGSEA ROAD

PROPOSED SHARED USE PATH WIDENING TO TIE BACK INTO EXISTING FOOTPATH

INSET A

CH. 2750

CH. 2800

CH. 2850

CH. 2900

PROPOSED SHARED USE PATH WIDENING

549222.752 E
262075.778 N

549225.626 E
262974.888 N

HB2 DR BN

DRBN

DR

TE

HORNINGSEA ROAD

HIGH STREET

FOR CONTINUATION REFER TO MILESTONE DRAWING:5020503-MIN-HGA-ZZ-DR-CH-0102-S2

TIE-IN TO MILESTONE'S DESIGN

FOR CONTINUATION SEE BELOW

EXISTING DITCH, MAX LEVEL DIFFERENCE APPROX. 1M

PROPOSED TRAFFIC SIGNS TO 20MPH ZONE / 30MPH - 20MPH ZONE ENDS

TRAFFIC REGULATION ORDER REQUIRED FOR TEMPORARY ROAD CLOSURE

UNKNOWN INFORMATION ON DRAINAGE NETWORK

CONTRACTOR TO VERIFY LONGFALL ALONG EXISTING CHANNEL LINE TOWARDS EXISTING KERB INLET

0 1:250 12.5 metres

INSET A

BUILDOUT SETTING OUT INFORMATION

DISTANCE TO SETTING OUT REFERENCE, SOUTHERN EDGE OF ACCESS GATE

8.3

19

8.91 8.90 8.97 9.08 9.09 9.16 9.25

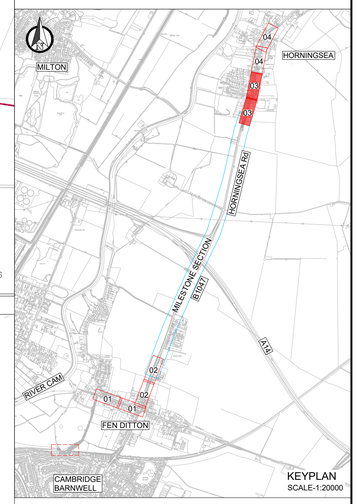
8.98 8.97 8.88 9.05 8.93 9.15 9.03 9.15 9.19 9.22 9.10 9.20 9.08

8.86 8.96 8.97 9.00 9.08 9.11 9.14 9.15 9.15

3 1:40 5 1:30 2.3 3

HB2 DR BN DR DR BN DR

0 1:150 7.5 metres



NOTES

1. THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH ALL RELEVANT DOCUMENTATION, DRAWINGS AND STANDARD DETAILS.
2. IN ACCORDANCE WITH THE CDM REGULATIONS RESIDUAL RISKS OF SIGNIFICANCE ARE INDICATED ON THE GA DRAWING.
3. DIMENSIONS SHALL NOT BE SCALED FROM THIS DRAWING. ALL DIMENSIONS IN METRES UNLESS OTHERWISE STATED.
4. ALL PROPOSED SHARED USE PATHS AND FOOTWAY RESURFACING TO HAVE A MINIMUM CROSSFALL OF 1:40 .
5. DESIGN BASED ON TOPOGRAPHICAL SURVEYS "44990_S1_T_REV0" AND "44990_S2_T_REV0" FROM "GREENHATCH", DATED 31/08/2022 & 16/09/2022 RESPECTIVELY.
6. DESIGN BASED ON HIGHWAY BOUNDARY PROVIDED BY GREATER CAMBRIDGESHIRE PARTNERSHIP ON 17/03/2021 AND CONFIRMED THROUGH CONSULTATION ON DATE 29/06/2023.
7. REFER TO DRAWING SERIES: 3562-WSP-HS-XX-DR-CV-251200 FOR ROAD MARKINGS AND SIGNS STRATEGY.
8. REFER TO DRAWING SERIES: 3562-WSP-HS-XX-DR-CV-250900 FOR CROSS SECTIONS.
9. REFER TO DRAWING SERIES: 3562-WSP-HS-XX-DR-CV-250910 FOR STANDARD DETAILS.

PROPOSED QUIET STREET ENVIRONMENT

PROPOSED 20MPH SPEED LIMIT ON HORNINGSEA ROAD

PROPOSED TRAFFIC SIGNS TO 20MPH ZONE / 30MPH - 20MPH ZONE ENDS.

PROPOSED TRAFFIC SIGNS TO 20MPH ZONE / 30MPH - 20MPH ZONE ENDS.

PRIORY ROAD

LIMIT OF WORKS

CH. 2950

CH. 3000

CH. 3050

DISTANCE TO SETTING OUT REFERENCE, BOUNDARY OF PROPERTY "THE PRIORY"

The Priory

HIGH STREET

2 1.2 1.5 3.3 3.3 3.2

FOR CONTINUATION SEE ABOVE

FOR CONTINUATION REFER TO DRG: 3562-WSP-HS-XX-DR-CV-251004

TRAFFIC REGULATION ORDER REQUIRED FOR TEMPORARY ROAD CLOSURE

0 1:250 12.5 metres

KEY

- PROPOSED CYCLEWAY / FOOTWAY RESURFACING AS PER HERCS 2023 APPENDIX 10 TYPE A
- PROPOSED CYCLEWAY / FOOTWAY NEW FULL DEPTH CONSTRUCTION AS PER HERCS 2023 APPENDIX 10 TYPE A
- PROPOSED CARRIAGEWAY RESURFACING AS PER HERCS 2023 APPENDIX 1
- PROPOSED RAISED TABLE EXTENSION
- PROPOSED BLOCK PAVING
- PROPOSED 800mm CORDUROY
- PROPOSED RED TACTILE PAVING
- PROPOSED ROAD MARKINGS
- EXISTING ROAD MARKING TO BE REMOVED THROUGH HYDROBLASTING
- PROPOSED BOLT DOWN TRAFFIC ISLAND
- PROPOSED TRAFFIC SIGN
- PROPOSED BOLLARD
- PROPOSED BELISHA BEACON
- HIGHWAY BOUNDARY
- WORK EXTENTS
- SETTING OUT REFERENCE LINE
- HB2 PROPOSED 125mm HB2 KERB - HERCS 2023 APPENDIX 4 KERB DETAIL
- DR PROPOSED 125MM TO 6MM DROPPER KERB
- BN PROPOSED BN 6MM DROPPED KERB
- TE PROPOSED TIMBER EDGING
- EF PROPOSED PCC EDGING KERB - HERCS 2023 APPENDIX 4 EDGING DETAIL
- Gy EXISTING GULLY
- Bg EXISTING KERB INLET
- +9.16 EXISTING LEVELS
- +9.16 PROPOSED LEVELS
- 1:30 PROPOSED CROSSFALL
- EXISTING REFLECTIVE STUDS TO BE TAKEN UP AND REMOVED TO TIP OFF SITE
- KERBS TO BE TAKEN UP AND REMOVED TO TIP OFF SITE

KEY TO HEALTH AND SAFETY SYMBOLS

	INDICATES A RESIDUAL RISK REQUIRING A COMPULSORY ACTION.
	INDICATES A RESIDUAL RISK FOR INFORMATION.
	INDICATES A RESIDUAL RISK REQUIRING A PROHIBITIVE ACTION.
	INDICATES A RESIDUAL RISK AS A WARNING.

IT SHOULD BE UNDERSTOOD THAT ALL DRAWINGS ARE ISSUED AS PRELIMINARY AND NOT FOR CONSTRUCTION. SHOULD THE CONTRACTOR AND / OR EMPLOYER COMMENCE WORK PRIOR TO APPROVAL BEING GIVEN, IT IS ENTIRELY AT THEIR OWN RISK

REV	DATE	BY	DESCRIPTION	CHK	APD
P01	14/11/2023	CB	ISSUED FOR CONSTRUCTION APPROVAL		

DRAWING STATUS: S4 - FOR APPROVAL

wsp
62-64 Hills Road, Cambridge, CB2 1LA, UK
T +44 (0) 1223 558 050, F +44 (0) 1223 558 051
www.wsp.com

CLIENT: GREATER CAMBRIDGE PARTNERSHIP

PROJECT: HORNINGSEA GREENWAY DETAILED DESIGN

TITLE: GENERAL ARRANGEMENT SHEET 03 OF 04

SCALE @ A1	DATE	DESIGN/DRAWN	CHECKED	APPROVED	SHEET
1:250	OCT 2023	RVA	AKM	ACC	A1

WSP PROJECT NO. 70113562

DRAWING No. 3562-WSP-HS-XX-DR-CV-250103 REV: P01

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C:\Users\UKCDB0052\WSP 0365\70113562 - Horningsea Greenway detailed Design - Documents\03 WIP\Civil Engineering\03 Drawings\3562-WSP-HS-XX-DR-CV-250100.dwg 14 Nov, 2023 - 2:07pm

PROPOSED QUIET STREET ENVIRONMENT

PROPOSED 20MPH SPEED LIMIT ON HORNINGSEA ROAD

EXISTING 'SLOW' MARKING TO BE REFRESHED

DISTANCE TO SETTING OUT REFERENCE, BOUNDARY OF PROPERTY 54

CH. 3100

CH. 3200

CH. 3250

FOR CONTINUATION REFER TO DRG. 3562-WSP-HS-XX-DR-CV-250103

HIGH STREET

SLOW

11.2

3.3

3.3

1.3

3.2

3.2

1.5

1.2

3.3

8.4

DISTANCE TO SETTING OUT REFERENCE, BOUNDARY OF PROPERTY 1

TRAFFIC REGULATION ORDER REQUIRED FOR TEMPORARY ROAD CLOSURE

TRAFFIC REGULATION ORDER REQUIRED FOR TEMPORARY ROAD CLOSURE

EXISTING BUS STOP

LIMIT OF WORKS

HIGH STREET

EXISTING 'SLOW' MARKING TO BE REFRESHED

FOR CONTINUATION SEE BELOW

0 1:250 12.5 metres

PROPOSED QUIET STREET ENVIRONMENT

PROPOSED 20MPH SPEED LIMIT ON HORNINGSEA ROAD

PROPOSED TRAFFIC SIGNS TO 20MPH ZONE / 30MPH - 20MPH ZONE ENDS

PROPOSED TRAFFIC SIGNS TO 20MPH ZONE / 30MPH - 20MPH ZONE ENDS

PROPOSED TRAFFIC SIGNS TO 20MPH ZONE / 30MPH - 20MPH ZONE ENDS

LIMIT OF WORKS

LIMIT OF WORKS

CH. 3300

CH. 3350

CH. 3400

CH. 3404

ST JOHNS LANE

DOCK LANE

EXISTING BUS STOP

HIGH STREET

3.2

1.0

1.2

3.3

3.3

11

DISTANCE TO SETTING OUT REFERENCE, SOUTHERN EDGE OF ACCESS GATE

CLAYHITHE Rd

LIMIT OF WORKS

PROPOSED TRAFFIC SIGNS TO 20MPH ZONE / 30MPH - 20MPH ZONE ENDS

FOR CONTINUATION SEE ABOVE

SLOW

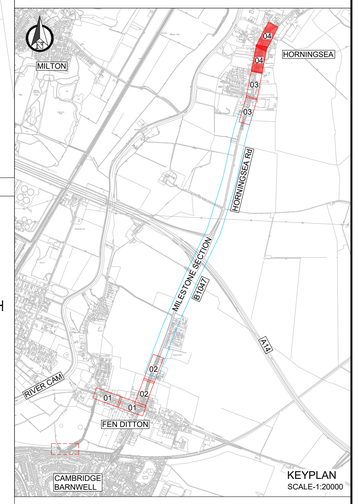
EXISTING 'SLOW' MARKING TO BE REFRESHED

TRAFFIC REGULATION ORDER REQUIRED FOR TEMPORARY ROAD CLOSURE

0 1:250 12.5 metres

NOTES

1. THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH ALL RELEVANT DOCUMENTATION, DRAWINGS AND STANDARD DETAILS.
2. IN ACCORDANCE WITH THE CDM REGULATIONS RESIDUAL RISKS OF SIGNIFICANCE ARE INDICATED ON THE GA DRAWING.
3. DIMENSIONS SHALL NOT BE SCALED FROM THIS DRAWING. ALL DIMENSIONS IN METRES UNLESS OTHERWISE STATED.
4. ALL PROPOSED SHARED USE PATHS AND FOOTWAY RESURFACING TO HAVE A MINIMUM CROSSFALL OF 1:40 .
5. DESIGN BASED ON TOPOGRAPHICAL SURVEYS "44990_S1_T_REV0" AND "44990_S2_T_REV0" FROM "GREENHATCH", DATED 31/08/2022 & 16/09/2022 RESPECTIVELY.
6. DESIGN BASED ON HIGHWAY BOUNDARY PROVIDED BY GREATER CAMBRIDGESHIRE PARTNERSHIP ON 17/03/2021 AND CONFIRMED THROUGH CONSULTATION ON DATE 29/06/2023.
7. REFER TO DRAWING SERIES: 3562-WSP-HS-XX-DR-CV-251200 FOR ROAD MARKINGS AND SIGNS STRATEGY.
8. REFER TO DRAWING SERIES: 3562-WSP-HS-XX-DR-CV-250900 FOR CROSS SECTIONS.
9. REFER TO DRAWING SERIES: 3562-WSP-HS-XX-DR-CV-250910 FOR STANDARD DETAILS.



KEY

- PROPOSED CYCLEWAY / FOOTWAY RESURFACING AS PER HERCS 2023 APPENDIX 10 TYPE A
- PROPOSED CYCLEWAY / FOOTWAY NEW FULL DEPTH CONSTRUCTION AS PER HERCS 2023 APPENDIX 10 TYPE A
- PROPOSED CARRIAGEWAY RESURFACING AS PER HERCS 2023 APPENDIX 1
- PROPOSED RAISED TABLE EXTENSION
- PROPOSED BLOCK PAVING
- PROPOSED 800mm CORDUROY
- PROPOSED RED TACTILE PAVING
- PROPOSED ROAD MARKINGS
- EXISTING ROAD MARKING TO BE REMOVED THROUGH HYDROBLASTING
- PROPOSED BOLT DOWN TRAFFIC ISLAND
- PROPOSED TRAFFIC SIGN
- PROPOSED BOLLARD
- PROPOSED BELISHA BEACON
- HIGHWAY BOUNDARY
- WORK EXTENTS
- SETTING OUT REFERENCE LINE
- HB2 PROPOSED 125mm HB2 KERB - HERCS 2023 APPENDIX 4 KERB DETAIL
- DR PROPOSED 125MM TO 6MM DROPPER KERB
- BN PROPOSED BN 6MM DROPPED KERB
- TE PROPOSED TIMBER EDGING
- EF PROPOSED PCC EDGING KERB - HERCS 2023 APPENDIX 4 EDGING DETAIL
- Gy EXISTING GULLY
- Bg EXISTING KERB INLET
- 9.16 EXISTING LEVELS
- 9.16 PROPOSED LEVELS
- 1:30 PROPOSED CROSSFALL
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REV	DATE	BY	DESCRIPTION	CHK	APD
P01	14/11/2023	CB	ISSUED FOR CONSTRUCTION APPROVAL		

DRAWING STATUS: S4 - FOR APPROVAL

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CLIENT: GREATER CAMBRIDGE PARTNERSHIP

PROJECT: HORNINGSEA GREENWAY DETAILED DESIGN

TITLE: GENERAL ARRANGEMENT SHEET 04 OF 04

SCALE @ A1	DATE	DESIGN/DRAWN	CHECKED	APPROVED	SHEET
1:250	OCT 2023	RVA	AKM	ACC	A1

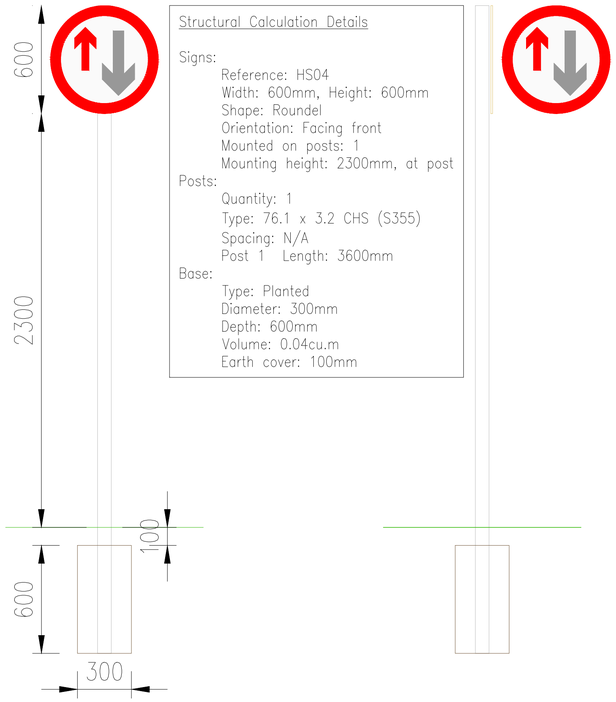
WSP PROJECT NO. 70113562

DRAWING No. 3562-WSP-HS-XX-DR-CV-250104 REV. P01

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Signing Project	Horningsea Greenway				
Sign Reference	615	Width (mm)	600	Background	White
x Height		Height (mm)	600	Border	Red
Material	Class RA2	Area (sq.m)	0.28	Legend	



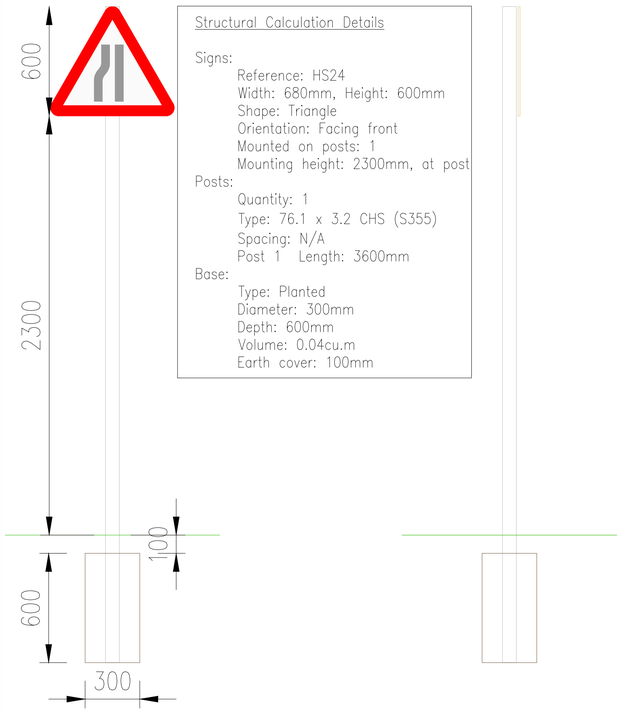
Structural Calculation Details

Signs:
- Reference: HS04
- Width: 600mm, Height: 600mm
- Shape: Roundel
- Orientation: Facing front
- Mounted on posts: 1
- Mounting height: 2300mm, at post

Posts:
- Quantity: 1
- Type: 76.1 x 3.2 CHS (S355)
- Spacing: N/A
- Post 1 Length: 3600mm

Base:
- Type: Planted
- Diameter: 300mm
- Depth: 600mm
- Volume: 0.04cu.m
- Earth cover: 100mm

Signing Project	Horningsea Greenway				
Sign Reference	517	Width (mm)	680	Background	White
x Height		Height (mm)	600	Border	Red
Material	Class RA2	Area (sq.m)	0.24	Legend	Black



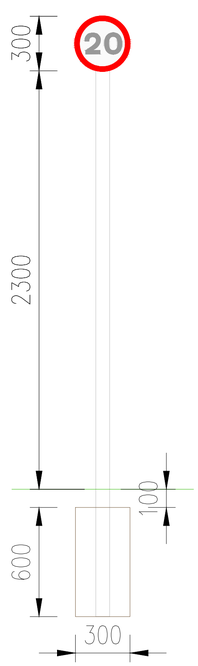
Structural Calculation Details

Signs:
- Reference: HS24
- Width: 680mm, Height: 600mm
- Shape: Triangle
- Orientation: Facing front
- Mounted on posts: 1
- Mounting height: 2300mm, at post

Posts:
- Quantity: 1
- Type: 76.1 x 3.2 CHS (S355)
- Spacing: N/A
- Post 1 Length: 3600mm

Base:
- Type: Planted
- Diameter: 300mm
- Depth: 600mm
- Volume: 0.04cu.m
- Earth cover: 100mm

Signing Project	Horningsea Greenway				
Sign Reference	670	Width (mm)	300	Background	White
x Height		Height (mm)	300	Border	Red
Material	Class RA2	Area (sq.m)	0.07	Legend	Black



Structural Calculation Details

Signs:
- Reference: HS10
- Width: 300mm, Height: 300mm
- Shape: Roundel
- Orientation: Facing front
- Mounted on posts: 1
- Mounting height: 2300mm, at post

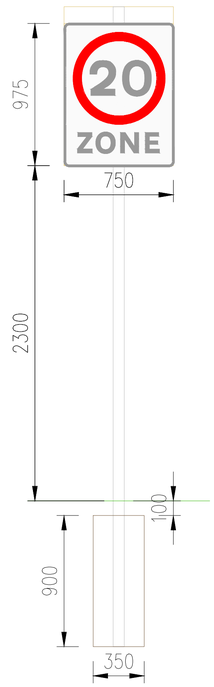
- Reference: HS11
- Width: 300mm, Height: 300mm
- Shape: Roundel
- Orientation: Facing back
- Mounted on posts: 1
- Mounting height: 2300mm, at post

Posts:
- Quantity: 1
- Type: 76.1 x 3.2 CHS (S355)
- Spacing: N/A
- Post 1 Length: 3300mm

Base:
- Type: Planted
- Diameter: 300mm
- Depth: 600mm
- Volume: 0.04cu.m
- Earth cover: 100mm

Signing Project	Horningsea Greenway				
Sign Reference	674	Width (mm)	750	Background	White
x Height	50.0	Height (mm)	975	Border	Black
Material	Class RA2	Area (sq.m)	0.73	Legend	Black

Signing Project	Horningsea Greenway				
Sign Reference	675	Width (mm)	750	Background	White
x Height	50.0	Height (mm)	1090	Border	Black
Material	Class RA2	Area (sq.m)	0.82	Legend	Black



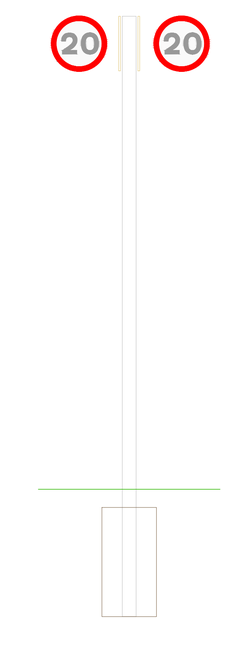
Structural Calculation Details

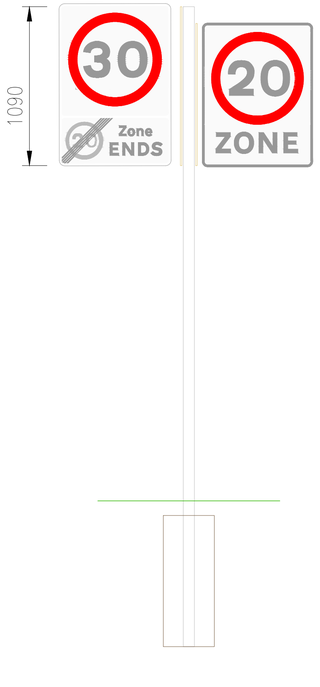
Signs:
- Reference: HS01,HS06,HS13,HS15, HS28,HS30,HS33,HS37,HS39
- Width: 750mm, Height: 975mm
- Shape: Rectangle
- Orientation: Facing front
- Mounted on posts: 1
- Mounting height: 2300mm, at post

- Reference: HS02,HS07,HS14,HS16, HS29,HS31,HS34,HS38,HS40
- Width: 750mm, Height: 1090mm
- Shape: Rectangle
- Orientation: Facing back
- Mounted on posts: 1
- Mounting height: 2300mm, at post

Posts:
- Quantity: 1
- Type: 76.1 x 3.2 CHS (S355)
- Spacing: N/A
- Post 1 Length: 4390mm

Base:
- Type: Planted
- Diameter: 350mm
- Depth: 900mm
- Volume: 0.09cu.m
- Earth cover: 100mm





Signing Project	Horningsea Greenway				
Sign Reference	670	Width (mm)	300	Background	White
x Height		Height (mm)	300	Border	Red
Material	Class RA2	Area (sq.m)	0.07	Legend	Black



Structural Calculation Details

Signs:
- Reference: HS18, HS19, HS22, HS23, HS26, HS27
- Width: 300mm, Height: 300mm
- Shape: Roundel
- Mounted back to back on Existing Lamp Columns

Signing Project	Horningsea Greenway				
Sign Reference	517	Width (mm)	680	Background	White
x Height		Height (mm)	600	Border	Red
Material	Class RA2	Area (sq.m)	0.24	Legend	Black

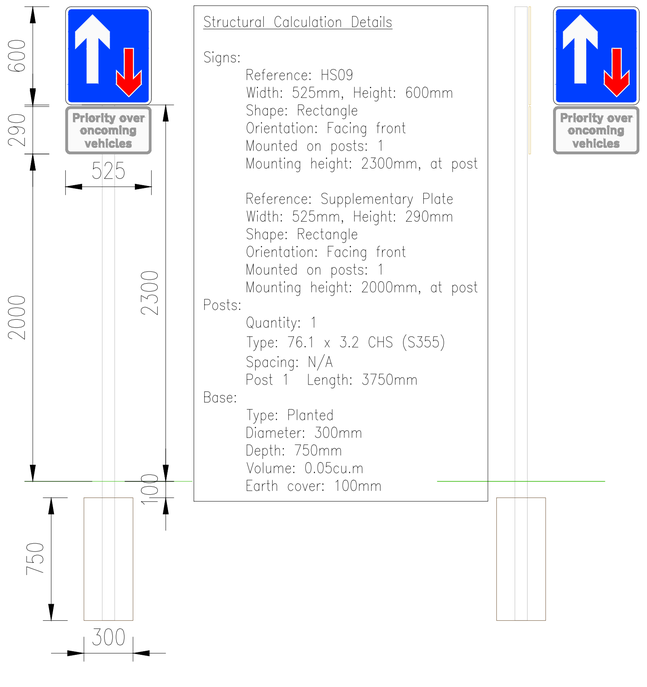


Structural Calculation Details

Signs:
- Reference: HS12, HS20
- Width: 680mm, Height: 600mm
- Shape: Triangular
- Mounted on Existing Lamp Columns

Signing Project	Horningsea Greenway				
Sign Reference	811	Width (mm)	525	Background	White
x Height	37.5	Height (mm)	290	Border	White
Material	Class RA2	Area (sq.m)	0.15	Legend	White

Signing Project	Horningsea Greenway				
Sign Reference	811	Width (mm)	525	Background	Blue
x Height	N/A	Height (mm)	600	Border	Black
Material	Class RA2	Area (sq.m)	0.32	Legend	Black



Structural Calculation Details

Signs:
- Reference: HS09
- Width: 525mm, Height: 600mm
- Shape: Rectangle
- Orientation: Facing front
- Mounted on posts: 1
- Mounting height: 2300mm, at post

- Reference: Supplementary Plate
- Width: 525mm, Height: 290mm
- Shape: Rectangle
- Orientation: Facing front
- Mounted on posts: 1
- Mounting height: 2000mm, at post

Posts:
- Quantity: 1
- Type: 76.1 x 3.2 CHS (S355)
- Spacing: N/A
- Post 1 Length: 3750mm

Base:
- Type: Planted
- Diameter: 300mm
- Depth: 750mm
- Volume: 0.05cu.m
- Earth cover: 100mm

UNTIL TECHNICAL APPROVAL HAS BEEN OBTAINED FROM THE RELEVANT LOCAL AUTHORITIES OR STATUTORY BODIES, IT SHOULD BE UNDERSTOOD THAT ALL DRAWINGS ARE ISSUED AS PRELIMINARY AND NOT FOR CONSTRUCTION. SHOULD THE CONTRACTOR AND / OR EMPLOYER COMMENCE WORK PRIOR TO APPROVAL BEING GIVEN, IT IS ENTIRELY AT THEIR OWN RISK

REV	DATE	BY	DESCRIPTION	CHK	APD
P01	10/11/2023	AS	ISSUE FOR CONSTRUCTION APPROVAL		

DRAWING STATUS: S4 - FOR APPROVAL

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62-64 Hills Road, Cambridge, CB2 1LA, UK
T +44 (0) 1223 558 050, F +44 (0) 1223 558 051
www.wsp.com

CLIENT: GREATER CAMBRIDGE PARTNERSHIP

PROJECT: HORNINGSEA GREENWAY DETAILED DESIGN

TITLE: PROPOSED TRAFFIC SIGN DETAILS

SCALE @ A1	DATE	DESIGN/DRAWN	CHECKED	APPROVED	SHEET
1:250	29/03/2023	AS	AKM	ACC	A1

WSP PROJECT NO.: 70113562

DRAWING No.: 3562-WSP-HS-XX-DR-CV-251205 REV.: P01

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CAUTION TO BE TAKEN WHEN CONSTRUCTING FULL-DEPTH SHARED USE PATH IN IMMEDIATE VICINITY OF HEDGEROW ROOTS

NEW FULL-DEPTH CONSTRUCTION TRENCH TO BE HAND-EXCAVATED NEXT TO HEDGEROW ROOTS

PROPOSED QUIET STREET ENVIRONMENT

PROPOSED 20MPH SPEED LIMIT ON HORNINGSEA ROAD

CH. 2750

CH. 2800

CH. 2850

CH. 2900

INSET A

PROPOSED SHARED USE PATH WIDENING

PROPOSED SHARED USE PATH WIDENING TO TIE BACK INTO EXISTING FOOTPATH

549222.752 E
262075.778 N

549225.626 E
262974.888 N

HORNINGSEA ROAD

HIGH STREET

FOR CONTINUATION REFER TO MILESTONE DRAWING:5020503-MIN-HGA-ZZ-DR-CH-0102-S2

TIE-IN TO MILESTONE'S DESIGN

FOR CONTINUATION SEE BELOW

EXISTING DITCH, MAX LEVEL DIFFERENCE APPROX. 1M

PROPOSED TRAFFIC SIGNS TO 20MPH ZONE / 30MPH - 20MPH ZONE ENDS

TRAFFIC REGULATION ORDER REQUIRED FOR TEMPORARY ROAD CLOSURE

UNKNOWN INFORMATION ON DRAINAGE NETWORK

CONTRACTOR TO VERIFY LONGFALL ALONG EXISTING CHANNEL LINE TOWARDS EXISTING KERB INLET

0 1:250 12.5 metres

INSET A

BUILDOUT SETTING OUT INFORMATION

DISTANCE TO SETTING OUT REFERENCE, SOUTHERN EDGE OF ACCESS GATE

8.3

19

1:40

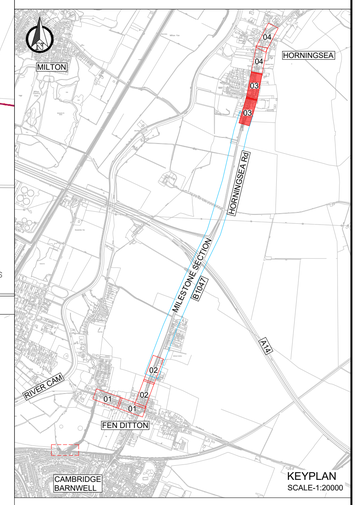
1:30

2.3

0 1:150 7.5 metres

NOTES

1. THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH ALL RELEVANT DOCUMENTATION, DRAWINGS AND STANDARD DETAILS.
2. IN ACCORDANCE WITH THE CDM REGULATIONS RESIDUAL RISKS OF SIGNIFICANCE ARE INDICATED ON THE GA DRAWING.
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7. REFER TO DRAWING SERIES: 3562-WSP-HS-XX-DR-CV-251200 FOR ROAD MARKINGS AND SIGNS STRATEGY.
8. REFER TO DRAWING SERIES: 3562-WSP-HS-XX-DR-CV-250900 FOR CROSS SECTIONS.
9. REFER TO DRAWING SERIES: 3562-WSP-HS-XX-DR-CV-250910 FOR STANDARD DETAILS.



PROPOSED QUIET STREET ENVIRONMENT

PROPOSED 20MPH SPEED LIMIT ON HORNINGSEA ROAD

PROPOSED TRAFFIC SIGNS TO 20MPH ZONE / 30MPH - 20MPH ZONE ENDS.

PROPOSED TRAFFIC SIGNS TO 20MPH ZONE / 30MPH - 20MPH ZONE ENDS.

PRIORY ROAD

LIMIT OF WORKS

CH. 2950

CH. 3000

CH. 3050

DISTANCE TO SETTING OUT REFERENCE, BOUNDARY OF PROPERTY "THE PRIORY"

The Priory

HIGH STREET

FOR CONTINUATION SEE ABOVE

FOR CONTINUATION REFER TO DRG: 3562-WSP-HS-XX-DR-CV-251004

TRAFFIC REGULATION ORDER REQUIRED FOR TEMPORARY ROAD CLOSURE

KEY

- PROPOSED CYCLEWAY / FOOTWAY RESURFACING AS PER HERCS 2023 APPENDIX 10 TYPE A
- PROPOSED CYCLEWAY / FOOTWAY NEW FULL DEPTH CONSTRUCTION AS PER HERCS 2023 APPENDIX 10 TYPE A
- PROPOSED CARRIAGEWAY RESURFACING AS PER HERCS 2023 APPENDIX 1
- PROPOSED RAISED TABLE EXTENSION
- PROPOSED BLOCK PAVING
- PROPOSED 800mm CORDUROY
- PROPOSED RED TACTILE PAVING
- PROPOSED ROAD MARKINGS
- EXISTING ROAD MARKING TO BE REMOVED THROUGH HYDROBLASTING
- PROPOSED BOLT DOWN TRAFFIC ISLAND
- PROPOSED TRAFFIC SIGN
- PROPOSED BOLLARD
- PROPOSED BELISHA BEACON
- HIGHWAY BOUNDARY
- WORK EXTENTS
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- HB2 PROPOSED 125mm HB2 KERB - HERCS 2023 APPENDIX 4 KERB DETAIL
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- Gy EXISTING GULLY
- Bg EXISTING KERB INLET
- 9.16 EXISTING LEVELS
- 9.16 PROPOSED LEVELS
- 1:30 PROPOSED CROSSFALL
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0 1:250 12.5 metres

REV	DATE	BY	DESCRIPTION	CHK	APD
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CLIENT: GREATER CAMBRIDGE PARTNERSHIP

PROJECT: HORNINGSEA GREENWAY DETAILED DESIGN

TITLE: GENERAL ARRANGEMENT SHEET 03 OF 04

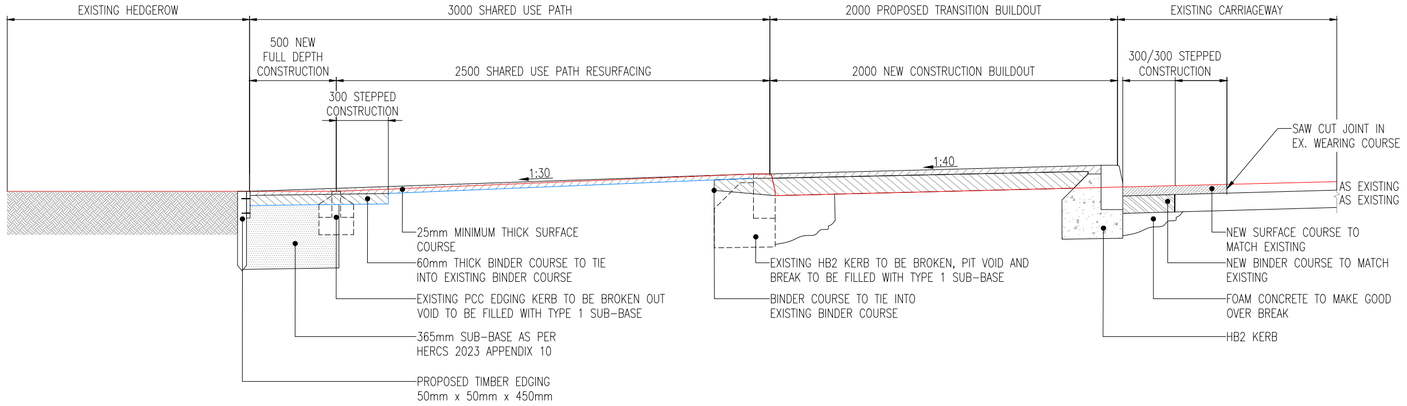
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1:250	OCT 2023	RVA	AKM	ACC	A1

WSP PROJECT NO.: 70113562

DRAWING No.: 3562-WSP-HS-XX-DR-CV-250103 REV.: P01

C:\Users\UKCDB0051\WSP 0365\70113562 - Horningsea Greenway detailed Design - Documents\03 WIP\Civil Engineering\03 Drawings\3562-WSP-HS-XX-DR-CV-250100.dwg 14 Nov, 2023 - 2:07pm

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TYPICAL CROSS SECTION AT CHAINAGE 2820

0 1.25 metres

DO NOT SCALE

KEY

EXISTING GROUND PROFILE

SURFACE PLANE OFF

NOTES

1. THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH ALL RELEVANT DOCUMENTATION, DRAWINGS AND STANDARD DETAILS.
2. DIMENSIONS SHALL NOT BE SCALED FROM THIS DRAWING. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE STATED.
3. DESIGN BASED ON TOPOGRAPHICAL SURVEYS "44990_S1_T_REV0" AND "44990_S2_T_REV0" FROM "GREENHATCH", DATED 31/08/2022 & 16/09/2022 RESPECTIVELY.
4. REFER TO DRAWING SERIES 3562-WSP-HS-XX-DR-CV-250100 FOR GENERAL ARRANGEMENT.
5. REFER TO DRAWING SERIES 3562-WSP-HS-XX-DR-CV-251200 FOR ROAD MARKINGS AND SIGNS.
6. REFER TO DRAIWNG SERIES 3562-WSP-HS-XX-DR-CV-050900 FOR STANDARD DETAILS.
7. ALL DESIGN TO BE IN ACCORDANCE WITH HERCS 2023 GUIDANCE DOCUMENT UNLESS OTHERWISE SPECIFIED

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REV	DATE	BY	DESCRIPTION	CHK	APP
P01	14/11/2023	RVA	ISSUE FOR CONSTRUCTION APPROVAL		

DRAWING STATUS: S4 - FOR APPROVAL

wsp
62-64 Hills Road, Cambridge, CB2 1LA, UK
T+ 44 (0) 1223 558 050, F+ 44 (0) 1223 558 051
wsp.com

GREATER CAMBRIDGE PARTNERSHIP

PROJECT: HORNINGSEA GREENWAY DETAILED DESIGN

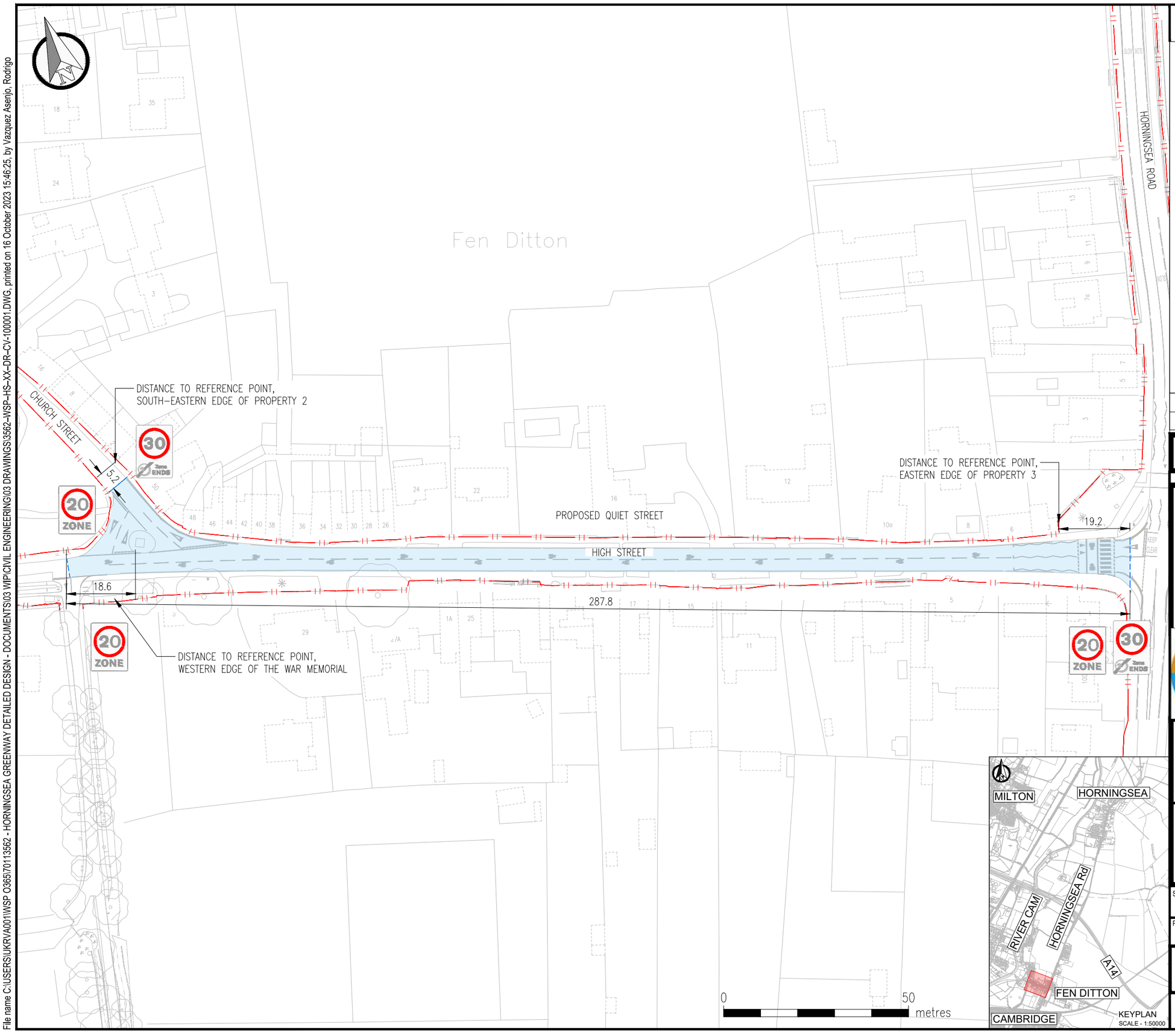
TITLE: STANDARD DETAIL TYPICAL CROSS SECTION

SCALE @ A2:	CHECKED:		APPROVED:
1:25	ACC		AKM
PROJECT No:	DESIGNED:	DRAWN:	DATE:
70113562	RVA	RVA	November 23

DRAWING No: 3562-WSP-HS-XX-DR-CV-025950 REV: P01

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DO NOT SCALE

KEY

- EXTENTS OF PROPOSED 20 MPH ZONE
- HIGHWAY BOUNDARY
- LOCATION OF SPEED LIMIT SIGNS

NOTES

1. ALL DIMENSIONS IN METRES UNLESS OTHERWISE STATED

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REV	DATE	BY	DESCRIPTION	CHK	APP
P01	13/10/2023	CB	FIRST ISSUE		

DRAWING STATUS: S2 - FOR INFORMATION

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GREATER CAMBRIDGE PARTNERSHIP

PROJECT: HORNINGSEA GREENWAY DETAILED DESIGN

TITLE: TRAFFIC REGULATION ORDER PROPOSED 20MPH ZONE FEN DITTON HIGH STREET

SCALE @ A3:	CHECKED:		APPROVED:
1:1000	RVA		ACC
PROJECT No:	DESIGNED:	DRAWN:	DATE:
70113562	CB	CB	October 23

DRAWING No: 3562-WSP-HS-XX-DR-CV-100001 REV: P01

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PRE-CONSTRUCTION INFORMATION PACK

HORNINGSEA GREENWAY DETAILED DESIGN

(CAMBRIDGESHIRE COUNTY COUNCIL – GCP)

PRE-CONSTRUCTION INFORMATION PACK

Document Identification Number:	3562-WSP-HS-XX-RP-CM-PCI
Issue Number:	2
Date:	December 2023

DOCUMENT AUTHORISATION SHEET

Client:	Greater Cambridge Partnership
Document Title	GCP Horningsea Greenway PCI
	PREPARED BY:
Name:	Rodrigo Vazquez Asenjo
Position:	Assistant Engineer
Date:	December 2023
Signature:	.....
	CHECKED BY:
Name:	Livio Martelli
Position:	Technical Director
Date:	
Signature:	.....
	APPROVED BY:
Name:	Graham Higgins
Position:	Technical Director
Date:	
Signature:	.....

DISTRIBUTION

Copy Number	Assigned To		
	Name	**Role**	**Company**
1	Ben Hathway and Pamela Hawkins	Client	Greater Cambridge Partnership (GCP)
2	Dan Woods	Contractor	Milestone Infrastructure
3	Dan Arnold	Contractor	Milestone Infrastructure
4			
5			
6			
7			
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9			
10			

ISSUE RECORD

Issue	Date	Description of Changes/Amendments	By	Approval
1	July 2023	First Draft – Phase 1	Rodrigo Vazquez Asenjo	Livio Martelli
2	December 2023	Second Draft – Phase 2 added	Rodrigo Vazquez Asenjo	Livio Martelli

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1 INTRODUCTION

This Pre-Construction Health and Safety Information Pack has been prepared in accordance with the Construction (Design and Management) Regulations 2015. It is a document which will eventually be developed into the Construction Phase (Health and Safety) Plan by the contractor on single contractor projects or the contractor appointed as the Principal Contractor for projects with more than one contractor. Initially it will be used to collate and summarise the information provided by the Client for use by the designers and contractors appointed, or being considered for appointment, on the project. All those involved with the pre-construction phase have a statutory duty to comply with it and to provide the Principal Designer with any information they have which is required to keep the pack up to date.

It is the intention of the Client that the project be designed and constructed in such a way that the risks to the health and safety of all persons engaged in its construction, future use, cleaning and maintenance or using a structure designed as a workplace are eliminated or reduced to an acceptable level.

This Information Pack is to provide information only and does not form part of the Contract. The full scope of the Works, the duration of the contract and the obligations of the Contractor, shall be ascertained by reference to the Contract documents read as a whole.

2 IDENTIFICATION OF ROLES

Please refer to section 9.4 for contact details.

2.1 Client

Greater Cambridge Partnership (GCP) is the Client as defined under the Construction (Design and Management) Regulations 2015.

2.2 Principal Designer

The Principal Designer for the Detailed Design Stage of the Horningsea Greenway is WSP

2.3 Principal Contractor

The Principal Contractor is Milestone Infrastructure

The duties of the Principal Contractor are set out in Construction (Design and Management) Regulations 2015. [Note that this includes preparation of the Construction Phase (Health and Safety) Plan, **prior** to the commencement of works on site].

2.4 Contractor

The Principal Contractor shall be responsible for the implementation of all safety management measures necessary for the execution of the work, and for the management of all Contractors on the site. All Contractors shall comply with the Construction Phase (Health and Safety) Plan, and with all relevant legislation, regulations, or codes of practice.

2.5 Designer

Under the CDM Regulations, a Designer is anybody who either prepares a design or arranges for a person under his/her control to prepare a design. Whilst designers have been appointed, a contractor may also be a designer under this definition, and therefore Regulations 9 and 10 will apply to them in the same way as it does to the architect, engineer, etc.

3 DESCRIPTION OF PROJECT

The detail below is provided to assist the contractor but should be treated as preliminary information and not categorical.

3.1 Introduction and Background

The Greater Cambridge Partnership (GCP) is embarking on the provision of a network of cycling facilities to promote sustainable travel and health benefits within the county. The Greenways Routes will provide full and light segregation for pedestrians and cyclists from motorised traffic with the objective of encouraging less confident and younger cyclists to use this method of travel.

GCP have identified Horningsea Greenway as 'early works sections', which have been earmarked for early construction and delivery. The route is within the highway boundary, which is not subject to significant risks relating to design, lengthy consents, or buildability constraints. The extents can be found in figure 3.1 below.

Full Horningsea Greenway extents:

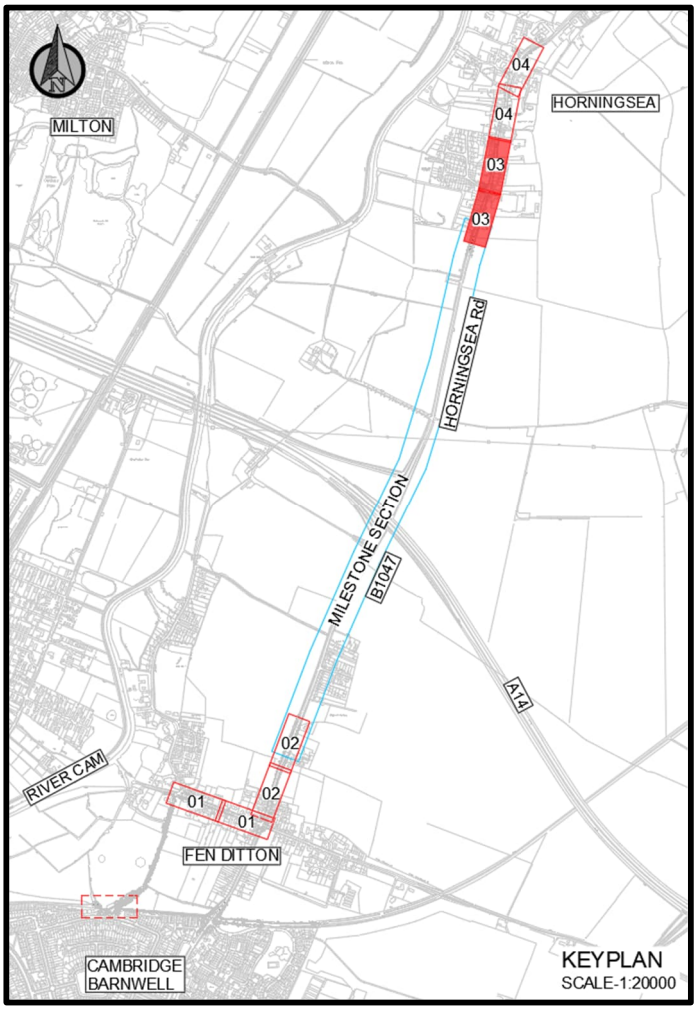


FIGURE 3-1 HORNINGSEA GREENWAY EXTENTS

3.2 Nature and Scope of the Work to be carried out

The early works sections along the Horningsea Greenway comprise the High Street and Horningsea Road within Horningsea village. These roads are crucial for the mobility of Horningsea as they represent the only

access to Horningsea from the south. Claythithe Road serves as the northern access to Horningsea from Waterbeach and ties directly to Horningsea High Street. This, together with the links to Fen Ditton and public rights of ways towards the River Cam presents a great opportunity for non-motorised travel in and out of Horningsea.

The works proposed include:

- Resurfacing of existing shared use paths on the southern approach of Horningsea.
- Widening of existing back of shared use paths where applicable to 3m wide in accordance with LTN 1/20.
- The provision of a transition buildout on the southern entry to Horningsea Village which offers safer transitions of cyclists on and off the shared use path onto the carriageway, and associated road markings and signage.
- Provision of road markings and signage to provide a 20mph speed zone within Horningsea village in the sections stipulated in figure 3.1.
- Provision of bolt-on modular buildouts along Horningsea High Street together with priority road markings to act as traffic calming measures while retaining the existing usable parking availability.
- Provision of cycle symbol road markings to increase the awareness of cyclists travelling on the carriageway on primary position.
- Maintenance of existing road markings along High Street, Horningsea Road and side roads through refreshing where applicable.

  Existing level checking around the proposed transition buildout to ensure an adequate long-fall towards the northern existing kerb inlet for surface water drainage. Should this be insufficient, alternative solutions including a combined kerb drainage system will be investigated.

The ‘southern early-works’ section of the Horningsea Greenway considers Fen Ditton, which includes High Street, Horningsea Road and Church Street in Fen Ditton as well as the entry to Wadloes Path. This section offers a NMU connection to the Bottisham Greenway through Wadloes Path and onto the “Bowtie”.

The works proposed include:

- Provision of road markings and signage for a 20mph speed zone within Fen Ditton High Street.
- Provision of a parallel crossing in place of the existing uncontrolled crossing on the Eastern end of Fen Ditton High Street and associated signage and road markings.
- Extension of raised table on the western side of the High Street-Horningsea Road intersection by 3.2m to accommodate the parallel crossing.
- Resurfacing to block paving on the western arm of the intersection of Church Street and High Street.
- Addition of cycle parking on the northern exit of Wadloes path together with a formalisation of the exit by resurfacing and paving.

  Provision of cycle symbol road markings to increase the awareness of cyclists travelling on High Street’s carriageway on primary position.

3.3 Location of Early Works Project and Extent of Site

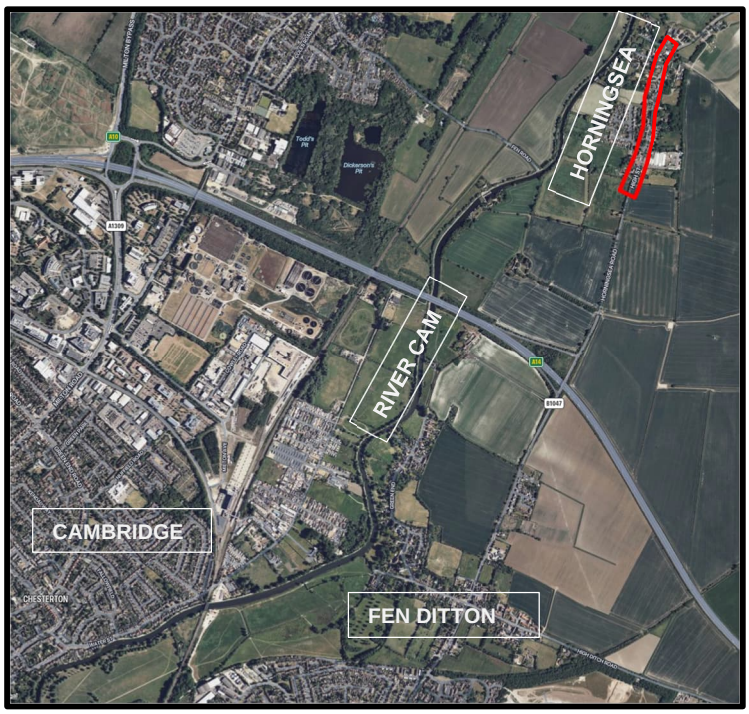


FIGURE 3-2 LOCATION OF EARLY WORKS AND EXTENTEN OF SITE

3.4 Existing Environment, Surrounding Land and its Use

The following list shows typical types of premises and their use around this construction site. This information must be considered when control measures are formulated for construction works, i.e. will the residents cause a hazard? Is a particular group of residents more at risk due to the construction works than others? Control measures required must be recorded in the method statements or safe systems of work documentation.

- ***Residential***

Dedicated space to be allocated for the contractor site compound and material storage area that does not impact the residents entering their homes. The development is in the close vicinity of residential areas for most of its length.

- ***Religious***

St. Mary the Virgin Church in Fen Ditton lies along the work extents of the Horningsea Greenway. Its access leads directly to the proposed resurfacing with imprinted Asphalt. Therefore, the redevelopment of this section will require to minimise disruption to its usual operation.

- ***Commercial / Office / Care home***

There are 3 commercial facilities within the extents of the development. While these are not within immediate vicinity of the works, care should still be taken to not impede beyond necessary the regular operation of these locals. The following are listed:

- Scotsdale's
- Plough & Fleece
- The Crown and Punchbowl.
- Ancient Shepherds
- Kings Head

- ***Existing Structures***

There are no above ground structures that WSP are proposing. It is the responsibility of the Contractor to ensure that the works do not negatively impact the existing metal rail, the wooden residence perimeter fence and residence brick wall.

Existing materials stored on site that may present a hazard.

None

- ***Ground Conditions / Contamination***

Not known

- ***Existing Utilities***

The term 'utility' means all underground services such as electricity, gas, water, storm water drain, foul sewer and telecommunication services. Buried utilities are widespread. It shall be assumed that they are present unless and until proven otherwise.

The exact location and depth of utilities must be verified using appropriate methods, **prior** to ground penetration by mechanical means at any location.

The location and depth of known existing utilities may be shown on the project utility drawings but are not limited to these drawings. Copies of these record drawings are to be provided to those needing them. It should be noted that the locations shown on the drawings may not be accurate and will always require on site verification.

Prior to commencing works on site, it shall be the responsibility of the Principal Contractor to satisfy himself that all utilities on site have been located, identified and marked, and disconnected or diverted as required, **prior** to commencing work in the particular area in question.

The C2 search (CAD Fusion Plan) has been carried out for this scheme and is readily available for the Principal Contractor if required. Trial hole investigations to be carried out by the Contractor prior to commencing works on site.

The contractors will record details of all changes that have been carried out during diversionary/installation works, details of any additional utilities not shown on the drawings, and of actual locations of utilities if different to that shown. This information shall be forwarded to the utility owner and to the Principal Contractor to be compiled as part of the 'as-built' drawings.

3.5 Project Program, Timescales and Phasing

- *Phasing of Works*

The Horningsea Greenway will be constructed in two phases consisting of the "Northern Early Works" phase which focuses on Horningsea Road and High Street, and the subsequent "Southern Early Works" phase for the remainder of the route in Fen Ditton.

Phase 1 Program and Timescales:

- Proposed lead-in time (weeks): 4 weeks
- Envisaged Commencement Date: 4/12/2023
- Envisaged Completion Date: January 2024 (Milestone to confirm)
- Initial Notification to the HSE: TBC

Phase 2 Program and Timescales:

- Proposed lead-in time (weeks): 7 weeks
- Envisaged Commencement Date: 12/02/2024

- Envisaged Completion Date: (Milestone to confirm)
- Initial Notification to the HSE: TBC

The Principal Contractor shall confirm that the Works and associated phasing can be achieved within their actual programmed timescale, without prejudice to health and safety aspects of the contract.

3.6 Site Access, Compound, and Storage

- *Site Compound*

Initial potential locations of the site compound, area for materials storage and welfare facilities have already been identified by the Principal Contractor at the Concept Design Review Report. Final location shall be arranged and detailed in the Construction Phase (Health and Safety) Plan.

- *Site access*

The Principal Contractor shall determine details of safe access and egress, avoiding risk to others. Also refer to section 7 Traffic Management.

- *Storage and Distribution of Materials*

Materials, plant and equipment shall be stored with due regard to the risks posed to pedestrians, vehicle traffic and site personnel. Where the risk of interference is high, compounds shall be constructed to provide a secure enclosure.

Only the minimum quantity of hazardous substances will be permitted to be stored on site in properly constructed and labelled containers so as to reduce potential environmental impacts and possible harm. Appropriate methods of containment for accidental leakage shall be implemented (e.g. bunding of oil storage). Materials and spoil storage areas shall be detailed in the traffic management plan.

- *Temporary Services / Welfare Facilities*

The Principal Contractor shall provide and maintain appropriate welfare facilities. Details shall be provided in the Construction Phase (Health and Safety) Plan.

- *Traffic Management*

The Principal Contractor shall provide and maintain the traffic management required when carrying out the works. In areas of proposed footway widening, the contractor shall provide two-way signalised traffic control with one lane closure. Resurfacing and lining to be carried out under full road closures. Parking restrictions will also be required during these times. Temporary full road closures may also be required (subject to a temporary traffic order regulations) in areas where the proposed build out encroaches into the centreline; alternatives route indications to be provided by the Principal Contractor.

4 Interfaces

The Principal Contractor shall, both prior to and during the work activities, identify any issues where other parties may interface with the work activity. Co-operative measures will be introduced to ensure that such interfaces do not import risk.

The following interfaces have been identified:

Reference No.	Description	Comment
Local Authority	Cambridge County Council (CCC)	The Client and highway authority
Water Authority	Anglian / Cambridge Water	Water supply, foul and surface water sewers
Gas Authority	Cadent	Gas supplier

Reference No.	Description	Comment
Electrical Supply Authority	UK Power Networks	Electrical distribution in vicinity
Communications Authority	BT / Virgin Media / Vodafone	Telecoms in vicinity
Fire Authority	Cambridgeshire Fire & Rescue Service	Cambridge Fire Station to utilise Horningsea Road as access to Horningsea.
Buses	Cambridge County Council	Bus routes 19
Hospital	Addenbrooke's Hospital	Horningsea Road will provide a key link for ambulances to the hospital

In the event of a utilities failure, local authorities are responsible for working with the distribution company who brings the supply and health service providers to identify vulnerable people who are directly affected Please refer to section 9.4 for contact details.

5 Existing Drawings & Reports

Drawing Number	Title	Originated from	Rev/Date
3562-WSP-HS-XX-DR-CV-250101	GENERAL ARRANGEMENT - SHEET 01 OF 04	WSP	P01/20.12.2023
3562-WSP-HS-XX-DR-CV-250102	GENERAL ARRANGEMENT - SHEET 02 OF 04	WSP	P01/20.12.2023
3562-WSP-HS-XX-DR-CV-250103	GENERAL ARRANGEMENT - SHEET 03 OF 04	WSP	P01/14.11.2023
3562-WSP-HS-XX-DR-CV-250104	GENERAL ARRANGEMENT - SHEET 04 OF 04	WSP	P01/14.11.2023
3562-WSP-HS-XX-DR-CV-251201	PROPOSED TRAFFIC SIGNS AND ROAD MARKINGS - SHEET 01 OF 04	WSP	P01/20.12.2023
3562-WSP-HS-XX-DR-CV-251202	PROPOSED TRAFFIC SIGNS AND ROAD MARKINGS - SHEET 02 OF 04	WSP	P01/20.12.2023
3562-WSP-HS-XX-DR-CV-251203	PROPOSED TRAFFIC SIGNS AND ROAD MARKINGS - SHEET 03 OF 04	WSP	P01/14.11.2023
3562-WSP-HS-XX-DR-CV-251204	PROPOSED TRAFFIC SIGNS AND ROAD MARKINGS - SHEET 04 OF 04	WSP	P01/14.11.2023
3562-WSP-HS-XX-DR-CV-251205	PROPOSED TRAFFIC SIGNS DETAILS	WSP	P01/14.11.2023
3562-WSP-HS-XX-DR-CV-251206	PROPOSED TRAFFIC SIGNS DETAILS	WSP	P01/14.11.2023
3562-WSP-HS-XX-DR-CV-251207	PROPOSED TRAFFIC SIGNS SCHEDULE – PHASE 1	WSP	P01/14.11.2023
3562-WSP-HS-XX-DR-CV-251208	PROPOSED TRAFFIC SIGNS SCHEDULE – PHASE 2	WSP	P01/20.12.2023

3562-WSP-HS-XX-DR-CV-251209	PROPOSED TRAFFIC SIGNS DETAILS	WSP	P01/20.12.2023
3562-WSP-HS-XX-DR-CV-251210	PROPOSED TRAFFIC SIGNS DETAILS	WSP	P01/20.12.2023
3562-WSP-HS-XX-DR-CV-050900	STANDARD DETAILS	WSP	P01/14.11.2023
3562-WSP-HS-XX-DR-CV-025950	TYPICAL CONSTRUCTION DETAIL	WSP	P01/14.11.2023
3562–WSP–HS–XX–DR–CV-100001	TRO PROPOSED 20MPH ZONE FEN DITTON HIGH ST	WSP	P01/13.09.2023
3562–WSP–HS–XX–DR–CV-100002	TRO PROPOSED 20MPH ZONE HORNINGSEA ROAD - HIGH ST	WSP	P01/13.09.2023
3562–WSP–HS–XX–DR–CV-100003	TRO PROPOSED PARALLEL CROSSING FEN DITTON	WSP	P01/13.09.2023
3562–WSP–HS–XX–DR–CV-100006	TRO PROPOSED 30MPH BUFFER ZONE HORNINGSEA ROAD	WSP	P01/13.09.2023

6 RESTRICTIONS AFFECTING THE PROJECT

There are many restrictions that may affect the Works on this project, some of which may only exist during particular phases of the work. The Contractors shall identify all restrictions and the details of methods of work required to avoid conflict with them shall be recorded in the Construction Phase (Health and Safety) Plan.

Please see attached the Designers Risk Register and Design Risk Management for the full list of risks in this project:
T446 - Horningsea Design Risk Management Schedule

6.1 Potential Restrictions

The following is a non-exhaustive list of potential restrictions that may occur. Particular restrictions relevant to the Works shall be identified during the risk assessment process.

- Hours of work e.g. exam periods;
- Maintenance of vehicular (including emergency services) routings and pedestrian access;
- Program e.g. windows for closure of road/utility/canal etc.;
- Environmental issues e.g. to do with construction processes required; contaminated land or materials to be removed;
- Hot works may be restricted due to adjacent premises. This should be reflected in the hot works permit system used on the site.

6.2 Identified Restrictions

The following restrictions have been identified, and apply to this contract:

- *Restrictions on Access*
  - As mentioned on section 3.2, Horningsea Road and High Street are essential for the access of Horningsea and mobility within. As such, the Principal Contractor should identify ways to minimise the disruption to traffic flows along the area of work where applicable.
  - High Street in Fen Ditton is the only route to access Church Street which leads to residential areas. The Principal Contractor should identify ways to minimise the disruption to traffic flows along the area of work where applicable.

See section 7 for Traffic Management information

- *Restrictions on the Work Site*

Caution should be given to avoiding conflict with users of road during construction period. Road closures may be required during island and footway buildout construction.

Throughout the course of early works construction phase, access to driveways must be maintained.

Risks to be cautious about:

- Electrocution, due to digging above shallow services.
- Materials to be hand excavated in close proximity to existing gas mains to avoid any fracture of existing pipes.
- Caution to be taken when excavating near existing hedgerows to avoid striking the hedgerow roots.
- Caution to be taken when resurfacing the Church Street – High Street western arm in Fen Ditton to avoid damaging the existing memorial.

C2 stats plans report to be provided to Principal Contractor. Take precaution before excavating, follow safe systems of excavation and ensure trial holes and/or safe digging practices are always adopted.

Prior to commencing works on site, it shall be the responsibility of the Principal Contractor to satisfy himself that all utilities on site have been located, identified, disconnected, and diverted as required, **prior** to commencing work in the area.

Underground electrical distribution, low pressure gas, water, sewage and telecoms are present in the worksite. The Principal Contractor should be aware of the following statutory undertakers' equipment and take appropriate precautions.

Several Anglian and Cambridge Water manholes within the scheme extents with a foul and surface water sewer trunk running through the entire length of the work site.

No information on the Phase 1 section of Horningsea Road has been made available on existing drainage infrastructure at the time of design and therefore it should be confirmed through as-built drainage drawings or existing records. Should this information not be available, WSP, as Principal Designer, recommends CCTV surveys to be performed to obtain accurate data on the existing drainage system

Four traffic bolt-down buildouts have been proposed along the carriageway on High Street in Horningsea village. While utilities run underneath these proposals, the Redipave modules indicated in the Standard Details drawing provide a surface solution requiring minimal groundworks, thus not affecting any utility.

Plans have been supplied by utilities companies showing the approximate location of their apparatus has been passed to the Principal Contractor.

- *Restrictions on Working Hours*

Normal working hours will be as set out in the contract documents.
Works shall comply with the conditions and restrictions contained within the directions issued from time to time by the associated local authorities, together with any additional restrictions contained within the contract document.

- *Environmental impacts*

The Contractor shall use his best endeavours to reduce potentially adverse environmental impacts so far as reasonably practicable. Actions to achieve this shall include:

- Minimizing noise, dust and vibration from work activities
- Minimizing waste and re-using materials where practicable

- Minimizing the effect of disturbance on mature trees
- Segregation and controlled disposal of special waste
- Appropriate standards of behaviour by on-site personnel
- Minimizing mud on the highway
- Other environmental impacts that are identified throughout the works shall be assessed by the contractor for adequacy of controls as they arise
- *Noise / Dust / Vibration*

The Contractor shall ensure noise/dust/vibrations are kept to a minimum. The Principal Contractor shall determine methods and processes of monitoring and control. This shall be detailed in the Construction Phase (Health and Safety) Plan.

Noise emissions on site shall comply with BS 5228 Noise Control on Construction Sites. The Principal Contractor is to ensure that overall noise levels are maintained at an acceptable level, particularly during night time working in residential areas.

7 TRAFFIC MANAGEMENT

7.1 A traffic management plan to ensure safe movements and interactions between vehicles and pedestrians, both on and adjacent to the site shall be complied with by the contractor. It shall cover all expected work activities, delivery and storage areas, and it shall be expanded and / or amended to cover new or altered activities as they arise.

7.2 The Principal Contractor shall produce a detailed traffic management plan required for this work in accordance with the contract document for inclusion in the Construction Phase (Health and Safety) Plan.

7.3 The traffic management plan shall also provide for the requirement that the entrances and roads are kept clean and clear of obstructions, and prevent the spillage or deposit of clay, rubble or other debris on the entrance and other roads throughout the contract period.

7.4 The Principal Contractor shall be responsible for the design and implementation of all traffic safety management arrangements within the site and any affected areas outside of the site. He shall also be responsible for all associated consultations and for obtaining the necessary approvals for the arrangements.

7.5 It is the Principal Contractor's responsibility to ensure that the traffic management plan is acceptable to the local authority responsible for the road in question.

8 SITE WIDE ELEMENTS

The following health and safety issues relate to the site wide elements for which control measures are required by the Principal Contractor.

8.1 Site Welfare Facilities

The Principal Contractor shall provide in accordance with the CDM Regulations Schedule 2. These shall be maintained and upgraded as necessary throughout the duration of the contract.

8.2 Co-ordination of Traffic/Pedestrians

The Principal Contractor shall ensure that pedestrians and traffic are segregated so far as reasonably practicable on the site.

8.3 Site Access/Egress Points

The Principal Contractor is responsible for controlling access and egress to the site.

8.4 Removal of debris/rubble etc

The Principal Contractor shall arrange for regular removal of rubbish to authorised tips.

8.5 Emergency Vehicle Access

Access will be required to adjacent properties at all times.

8.6 Storage Area

The Principal Contractor shall arrange for safe storage of all materials on the site.

8.7 Delivery and positioning of plant, equipment, and materials

The Principal Contractor is responsible for planning and organising the positioning and movement of plant, equipment and materials across the site.

8.8 Identification and removal of any hazardous material

Known hazards are described in this document, but other hazards may arise during the works. The Principal Contractor shall assume that all unknown materials discovered are potentially hazardous, and seek advice before continuing. The Principal Contractor is responsible for arranging the safe removal and disposal of all such materials.

9 COMMUNICATION

Ongoing communication between all parties is a key element to maintaining safety. Any information that is relevant to other parties should be shared. If in doubt, tell all other parties.

The Principal Contractor shall arrange meetings at regular intervals (as appropriate to the stage of the works) to discuss issues that affect safety. Any (major) design changes should be discussed at these meetings.

9.1 Concerns

Current concerns in relation to health, safety or welfare shall be communicated directly between the contractors and the Principal Contractor/Site Safety Manager. Ongoing concerns will be communicated through the site meetings.

9.2 Audit of Processes

The Principal Contractor will undertake planned site safety inspections to supplement those undertaken by the Contractor's personnel. The frequency and timing of inspections will be determined by the level and nature of work activity.

Inspections shall include a sample audit of standards of safety management processes undertaken by the Principal Contractor in compliance with this plan.

9.3 Site Inspections

The Principal Contractor is responsible for conducting site inspections to ensure that safe working practices are maintained. Records shall be kept of the inspections.

An agreed schedule of inspections shall be included in the Construction Phase (Health and Safety) Plan.

9.4 Contact List

Role	Duty Holder	Contact Person	Position	Contact Details
Client	Cambridgeshire County Council (GCP)	Ben Hathway / Pamela Hawkins	-	New Shire Hall Emery Crescent Enterprise Campus, Weald, Huntingdon PE28 4YE Ben.Hathway@cambridgeshire.gov.uk Pamela.Hawkins@cambridgeshire.gov.uk
Principal Designer	WSP	WSP	-	Charter House, 64-66 Hills Road, Cambridge CB2 1LA
Principal Contractor	Milestone Infrastructure	Dan Woods	-	Adamson House, Towers Business Park, Wilmslow Rd, Didsbury, Manchester M20 2YY dan.wood@milestoneinfra.co.uk

9.5 Additional Project Contacts

Role	Contact Person	Position	Contact Details
None			

9.6 Records

When requested, the Principal Contractor shall provide, or make available for inspection any information regarding health, safety or welfare on the project. Such information may include:

- Accident/incident statistics and normalizing data
- Accident/incident reports
- Site safety reports
- Method statements
- Details on the implementation of the Construction Phase (Health and Safety) Plan
- HSE communications

9.7 Display of Notices

The following list gives the Principal Designer's recommendations for notices to be displayed prominently in the site offices:

- Notification to the HSE – F10 (rev) form (mandatory to display)
- The major accident / emergency plan
- Emergency procedures and contact numbers
- The site rules
- Hazard warning signs
- Access restriction signs/pedestrian and traffic routing

9.8 Re-design Work, New Design Work

The Principal Contractor shall inform the Principal Designer of any proposed re-design or new elements of design required **before** that particular work package commences.

10 HEALTH & SAFETY FILES

10.1 Existing Health & Safety File

There are no existing health and safety files relevant to these works.

10.2 Developed Health and Safety File for this Project

Throughout the pre-construction phase of the project the Principal Designer will commence the Health and Safety File, all contractors and designers are responsible for ensuring that all their relevant information for the Health and Safety File is prepared and handed over to the Principal Designer for inclusion in the File. Similarly, the Principal Contractor shall forward any relevant information he possesses to the Principal Designer for inclusion in the Health and Safety File. The Principal Designer will pass the completed Health and Safety File to the Client at completion of the project. However, if the Principal Designer's appointment ends before the project completion, he will pass the partially completed file to the Principal Contractor and the Principal Contractor will be responsible for completion of the File and its onward transmission to the Client.

Information contained in the file needs to include that which will assist persons carrying out construction work on the structure at any time after completion of the current project and could include:

- Drawings, calculations and plans used and produced throughout the demolition and construction process along with the design criteria.
- General details of the construction methods and materials used.

- Details of the structure's equipment and maintenance facilities
- Maintenance procedures and requirements for the structure
- Details of the location and nature of utilities/services and their maintenance/isolation, including emergency and fire-fighting systems, equipment, routes, procedures etc.
- Details of hazardous substances and safety data sheets
- Load bearing details – retaining walls, piling, floors, walls, trusses and thrust blocks etc.
- Foundations, crane bases, etc.
- Archaeological data relating to health and safety issues.

All information shall be provided both in hard copy and electronically (e.g. CD ROM or DVD). Initial "red line" drawings will be accepted provided these are legible, and will be replaced by CAD drawings within a reasonable timescale. Drawings at A3 size are preferable and must be legible.

Electronic format must utilise common packages such as Microsoft Word and Excel (but not Access). Drawings and other scanned documents shall be in pdf format, and not in any CAD format (e.g. DWG).

11 EMERGENCY ARRANGEMENTS

11.1 First Aid

A first aid box must be provided in the main site office, and at all mobile sites.

The Principal Contractor will be responsible for ensuring that the contents are replaced as necessary. The name of the First Aiders and the location of the first aid box are to be posted in the mess room/canteen.

11.2 First Aid, Fire Fighting and Emergency Arrangements

The Principal Contractor shall assess the site to determine the first aid and fire fighting requirements.

11.3 Emergency Assistance

The following are suggestions for telephone numbers and action plans to be displayed on the site notice board.

- Emergency telephone numbers
- Major accident - emergency plan
- Major fire/explosion – emergency plan
- On discovering a fire

11.4 Reporting of Accidents and Dangerous Occurrences

Accident reporting arrangements between the Principal Contractor, the HSE and Client are to be developed and included in the Construction Phase (Health and Safety) Plan.

All accidents **MUST** be reported to the Principal Contractor for inclusion in the accident book. Any RIDDOR (Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013) reportable accidents/dangerous occurrences will be investigated and a report submitted to the Health and Safety Executive by the Principal Contractor, as required.

The Contractor shall ensure that all current legislation with particular reference to the Health & Safety at Work etc. Act 1974 is implemented in spirit as well as the letter of the law.

12 Specific Site Rules

Establish and display clear rules and procedures for all visitors to the site. The principal contractor will be required to provide detailed site rules within the Construction Phase (Health and Safety) Plan in addition to those specified by the client, based on his own judgement of the project. These should include:

- Training & Site induction
- Accident reporting
- Personal protective equipment
- Permits to Work

12.1 Client Site Rules

The following rules will be incorporated by the Principal Contractor into the Construction Phase (Health and Safety) Plan (a copy of which shall be kept on site at all times):

- Tools, materials etc. are not to be left unattended.
- All waste must be stored in covered skips. No waste is to be burned on the site.
- The playing of radios, personal CD players etc. will not be permitted.
- Smoking will only be allowed in designated areas.
- There will be no horse play.
- Safety helmets and safety boots will be worn at all times.

13 THE DESIGN

13.1 Construction and Hazardous Materials

- *Substances Hazardous to Health – during construction*

The Principal Contractor shall continually monitor the project and ensure that substances hazardous to health are identified, along with the appropriate control measures.

Material safety data sheets shall be obtained for all substances hazardous to health in use as part of this project. All Contractors shall ensure the method of work, storage and disposal of this material is compatible with the requirements stated in the data sheet, and industrial best practice. A method statement shall be prepared, used and kept for the materials/substances in use.

- *Substances Hazardous to Health – during use of building or future maintenance / construction work*

The Principal Contractor shall ensure that material safety data sheets are obtained for all substances hazardous to health, which are to be installed, or are discovered in the structure as part of this project, for inclusion in the Health and Safety File.

- *Potential Substances and Materials that may be present.*

The following list is a non-exhaustive list of substances and materials that may be present:

- Lead paint
- Asbestos
- Sharps
- Hazardous substances (dusts, solvents, gases, acids, alkalis, etc.)

- Biological agents
- Contaminated water course or soil
- *Table of Substances and Materials identified at this stage.*

Material / Substance	Use / Location	Alternatives considered.
None	None	None

Please also refer to section 13.1.1 above.

13.2 Construction Risk Management

It is the policy of the client to attach the greatest importance to health and safety of all persons employed on the project, and directly affected by the works. The project will be constructed, so far as is reasonably practicable, in such a way that the risk to health and safety of all persons engaged in, or affected by its construction, use, maintenance and demolition are eliminated or reduced to an acceptable level under current health and safety legislation and good practice.

Method statements must be developed by the Principal Contractor and Contractors to manage and control hazards identified, see section 13.4 for those identified to date. The Principal Contractor and contractors must carryout additional risk assessments and develop method statements as necessary throughout the duration of the project. The resultant method statements or safe systems of work should be documented.

The method statement provided must:

- Inform the reader of the task and the associated risks.
- Inform the reader of what precautions are to be taken when faced with those risks.
- Inform the reader of who will provide those precautions.
- Inform the reader of the necessary plant, materials and equipment that must be utilised.

It is important that unplanned situations or activities that have not been previously assessed, but that may give rise to risk, are assessed before work is started.

13.3 Construction Risks - Summary

The following is a summary of the type of risk activity associated with this project.

- Excavation work: for the installation of the transition buildout and the widening of the shared use path.
- Conflict with the public: Contractor to design out a method statement and material storage plan prior to works commencement. Working areas to be fenced-off to avoid clashes with pedestrians always ensuring off-street premises access. Maintain a minimum of 1.2m free width footway at all times. Safety barriers to be in place before works commence.
- Work next to live traffic: Temporary road closures through temporary traffic order regulations will be applied for in order to mitigate the risk of personnel working adjacent to live traffic.
- Interfaces with existing utility apparatus: C2 searches undertaken however neither GPR survey nor trial holes have been progressed. Contractor to adopt safe working methods in line with HSG47 HSE Avoiding Danger From Underground-Services. This involves the need to detect underground services and contact utilities companies before digging. Additionally, the contractor should also adopt working methods in line with GS6 - Avoiding danger from overhead power lines to ensure appropriate safety working measures around are in place overhead cables present on site.
- Conflict with private driveways/access roads: The Principal Contractor will ensure suitable access is maintained for pedestrian routes and driveways to minimise conflict.

The following health and safety issues have not yet been resolved and control measures are required from the Principal contractor/Contractor.

- Working around utility services equipment

The T446: Design Risk Management Schedule and a C3 response summary can be found on the Appendix.

13.4 Significant Design Assumptions

Two design assumptions have been made:

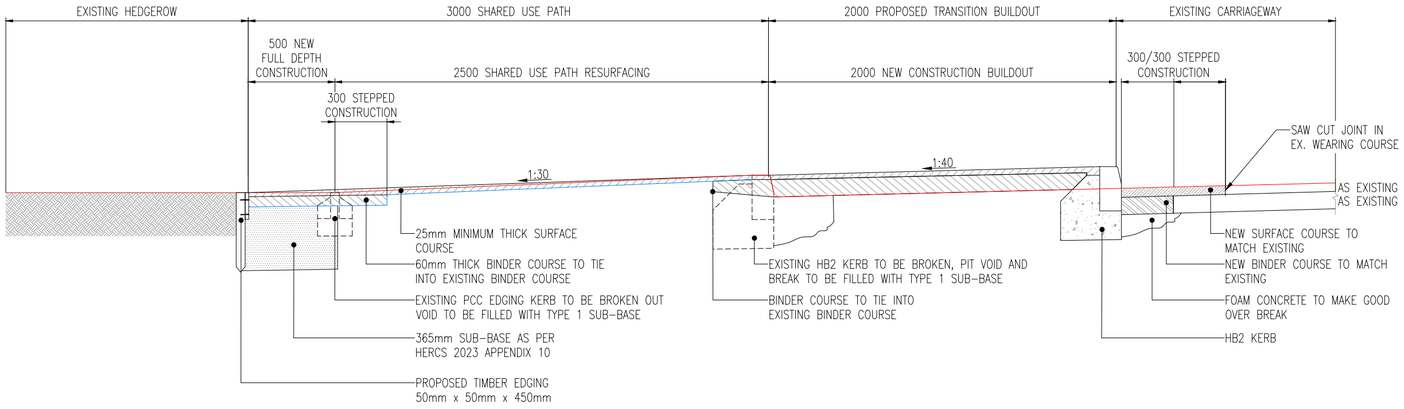
- The four buildouts located on High Street will be of the proprietary bolt down type to reduce the exposure of the workforce to live traffic. These will also be installed under temporary full road closures during in a quick turnaround as ensure by the supplier.
- Temporary traffic order regulations for temporary road closures will be requested to install the number of buildouts as these encroach into the centreline of the carriageway, while temporary traffic signals should be used to carry out the widening works on the existing shared use path on Horningsea Road.

14 ATTACHMENTS

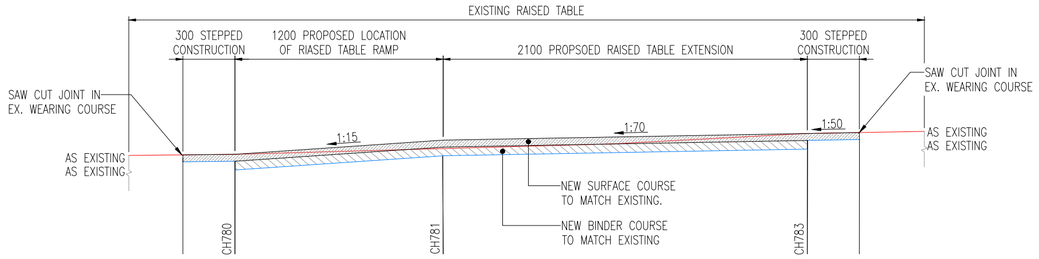
Statutory Undertakers apparatus location plans sent as a downloaded link.

15 APPENDIX

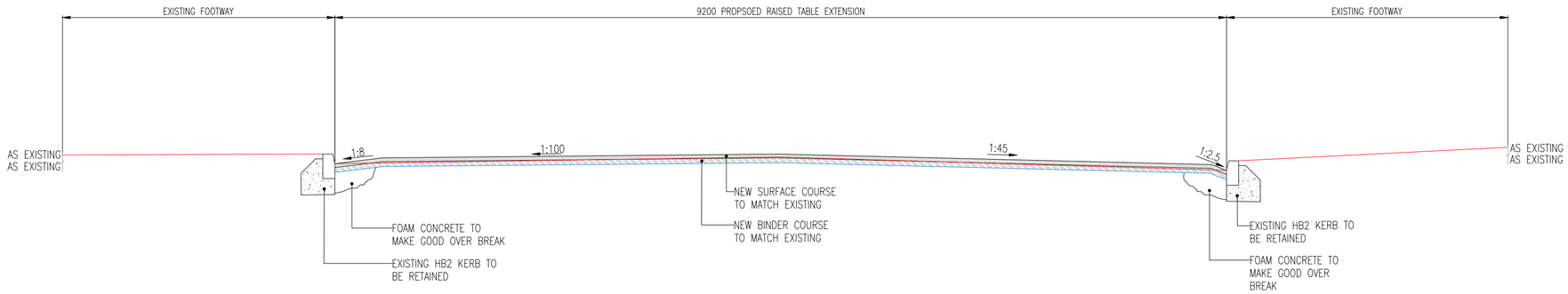
Appendix A - Risk Management Schedule
Appendix B - C3 Response Summary
Appendix C - Utility information



TYPICAL CROSS SECTION AT CHAINAGE 2820
SCALE – 1:25



TYPICAL LONG SECTION AT CHAINAGE 775–785
SCALE – 1:25



TYPICAL CROSS SECTION AT CHAINAGE 780
SCALE – 1:40

DO NOT SCALE

KEY

EXISTING GROUND PROFILE

SURFACE PLANE OFF

NOTES

1. THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH ALL RELEVANT DOCUMENTATION, DRAWINGS AND STANDARD DETAILS.
2. DIMENSIONS SHALL NOT BE SCALED FROM THIS DRAWING. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE STATED.
3. DESIGN BASED ON TOPOGRAPHICAL SURVEYS "44990_S1_T_REV0" AND "44990_S2_T_REV0" FROM "GREENHATCH", DATED 31/08/2022 & 16/09/2022 RESPECTIVELY.
4. REFER TO DRAWING SERIES 3562-WSP-HS-XX-DR-CV-250100 FOR GENERAL ARRANGEMENT.
5. REFER TO DRAWING SERIES 3562-WSP-HS-XX-DR-CV-251200 FOR ROAD MARKINGS AND SIGNS.
6. REFER TO DRAIWNG SERIES 3562-WSP-HS-XX-DR-CV-050900 FOR STANDARD DETAILS.
7. ALL DESIGN TO BE IN ACCORDANCE WITH HERCS 2023 GUIDANCE DOCUMENT UNLESS OTHERWISE SPECIFIED

UNTIL TECHNICAL APPROVAL HAS BEEN OBTAINED FROM THE RELEVANT LOCAL AUTHORITIES OR STATUTORY BODIES, IT SHOULD BE UNDERSTOOD THAT ALL DRAWINGS ARE ISSUED AS PRELIMINARY AND NOT FOR CONSTRUCTION. SHOULD THE CONTRACTOR AND / OR EMPLOYER COMMENCE WORK PRIOR TO APPROVAL BEING GIVEN, IT IS ENTIRELY AT THEIR OWN RISK

REV	DATE	BY	DESCRIPTION	CHK	APP
P02	20/12/2023	CB	DETAILS PROVIDED FOR RAISED TABLE EXTENSION	ACC	
P01	14/11/2023	RVA	ISSUE FOR CONSTRUCTION APPROVAL	AKM	LMM

DRAWING STATUS: S4 - FOR APPROVAL

wsp
62-64 Hills Road, Cambridge, CB2 1LA, UK
T+ 44 (0) 1223 558 050, F+ 44 (0) 1223 558 051
wsp.com

GREATER CAMBRIDGE PARTNERSHIP

PROJECT: HORNINGSEA GREENWAY DETAILED DESIGN

TITLE: TYPICAL CROSS SECTIONS & LONG SECTION

SCALE @ A2:	CHECKED:		APPROVED:
AS SHOWN	ACC		AKM
PROJECT No:	DESIGNED:	DRAWN:	DATE:
70113562	RVA	RVA	December 23

DRAWING No: 3562-WSP-HS-XX-DR-CV-025950 REV: P02

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File name C:\USERS\UKCDB005\WSP O365\70113562 - HORNINGSEA GREENWAY DETAILED DESIGN - DOCUMENTS\03 WIP\CIVIL ENGINEERING\03 DRAWINGS\3562-WSP-HS-XX-DR-CV-025950.DWG, printed on 20 December 2023 15:33:02, by Bushell, Cameron

C3 Summary Responses		
Utility Company	Response	Comments
Anglian Water	No diversions required	Following measures to be taken where applicable - All manhole covers must be adjusted to suit the finished surface level, using Class B engineering Brickwork - Any manhole now falling in the carriageway, due to your proposed works, must have their covers and frames replaced to comply with BSEN 124 D400 (grade A) and be badged 'FW' or 'SW' as appropriate. - No street furniture shoudl be placed direclty over our apparatus. - Due care and attention must be taken when working in the vicinity of our apparatus. - No recessed covers to be used on the public sewer.
Cadent Gas	No diversions required	No Apparatus found on Horningsea village.
Openreach BT	No diversions required	N/A
Cambridge Water	No diversions required	Depth of mains should be at a nominal depth of 900mm, service pipes should be laid at a nominal depth of 750mm. Both if required should be located through had dug trial hole excavation. A clear distance of at least 300mm must be maintained between the existing apparatus and proposed permanent features.
Cityfibre	No diversions required	No assets in the area
UKPN	No diversions required	N/A
Virgin Media	No diversions required	N/A
GTC	No diversions required	No Apparatus found on Horningsea village.
NEOS Networks	No diversions required	N/A
Sky	Infrastructure belongs to Virgin Media	N/A

PROPOSED TRAFFIC SIGN TO 20MPH ZONE / 30MPH - 20MPH ZONE ENDS

IMPREXA UK IMPRINTED ASPHALT IN A STRETCHER BOND PATTERN OR SIMILAR APPROVED BY THE ENGINEER

LIMIT OF WORKS

PROPOSED QUIET STREET ENVIRONMENT

PROPOSED 20MPH SPEED LIMIT ON HIGH STREET

ST. MARY THE VIRGIN FEN DITTON

CHURCH STREET

PROPOSED STANDS FOR BICYCLE PARKING. EXISTING BIN TO BE RETAINED. EXISTING HEDGEROW TO BE RETAINED.

HIGH STREET

LIMIT OF WORKS

BN

HBN

TE

1.5

LP GAS

20

20

FOR CONTINUATION SEE BELOW

EXISTING BENCH TO BE RETAINED

EXISTING TELEGRAPH POLE AND OH CABLES

EXISTING TELEGRAPH POLE AND OH CABLES

EXISTING UTILITIES

CLOSES FOOTPATH

CH. 0500

CH. 0550

CH. 0600

CH. 0650

0 1:250 12.5 metres

INSET B

PARALLEL CROSSING SETTING OUT INFORMATION

DISTANCE TO SETTING OUT REFERENCE, EASTERN EDGE OF PROPERTY 3

2.3 3 4.5

12.43 12.54 12.57

12.49 12.58 12.61

12.38 12.47 12.50

8.3

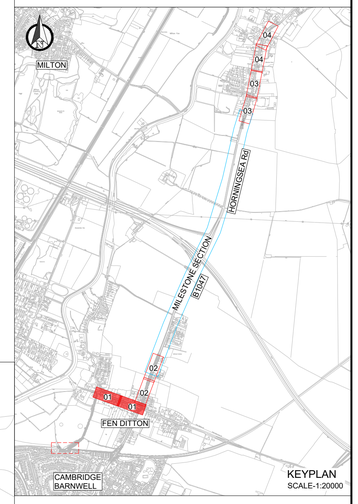
5.8 3.2

7.3

0 1:150 7.5 metres

NOTES

1. THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH ALL RELEVANT DOCUMENTATION, DRAWINGS AND STANDARD DETAILS.
2. IN ACCORDANCE WITH THE CDM REGULATIONS RESIDUAL RISKS OF SIGNIFICANCE ARE INDICATED ON THE GA DRAWING.
3. DIMENSIONS SHALL NOT BE SCALED FROM THIS DRAWING. ALL DIMENSIONS IN METRES UNLESS OTHERWISE STATED.
4. ALL PROPOSED SHARED USE PATHS AND FOOTWAY RESURFACING TO HAVE A MINIMUM CROSSFALL OF 1:40 .
5. DESIGN BASED ON TOPOGRAPHICAL SURVEYS "44990_S1_T_REV0" AND "44990_S2_T_REV0" FROM "GREENHATCH", DATED 31/08/2022 & 16/09/2022 RESPECTIVELY.
6. DESIGN BASED ON HIGHWAY BOUNDARY PROVIDED BY GREATER CAMBRIDGESHIRE PARTNERSHIP ON 17/03/2021 AND CONFIRMED THROUGH CONSULTATION ON DATE 29/06/2023.
7. REFER TO DRAWING SERIES: 3562-WSP-HS-XX-DR-CV-251200 FOR ROAD MARKINGS AND SIGNS STRATEGY.
8. REFER TO DRAWING SERIES: 3562-WSP-HS-XX-DR-CV-250900 FOR CROSS SECTIONS.
9. REFER TO DRAWING SERIES: 3562-WSP-HS-XX-DR-CV-250910 FOR STANDARD DETAILS.



PROPOSED QUIET STREET ENVIRONMENT

FOR CONTINUATION REFER TO DRG. 3562–WSP–HS–XX–DR–CV–250102

PROPOSED 20MPH SPEED LIMIT ON HIGH STREET

EXISTING TELEGRAPH POLE AND OH CABLES

FOR CONTINUATION SEE ABOVE

CH. 0700

CH. 0750

CH. 0800

HIGH STREET

PROPOSED SIGN TO 20MPH ZONE / 30MPH - 20MPH ZONE ENDS

INSET B

HORNINGSEA ROAD

KEEP CLEAR

HIGH DITCH ROAD

LIMIT OF WORKS

EXISTING RAISED TABLE TO BE EXTENDED

PROPOSED PARALLEL CROSSING, RAISED TABLE EXTENDED WEST BY 2.2m EXISTING TACTILE PAVING EITHER SIDE OF EXISTING UNCONTROLLED CROSSING TO BE TAKEN UP AND REMOVED TO TIP OFF SITE AND REPLACED BY RED TACTILE PAVING WITH APPLIED BALLONTINI

LIMIT OF WORKS

DITTON LANE

EXISTING TELEGRAPH POLE AND OH CABLES

0 1:250 12.5 metres

KEY

- PROPOSED CYCLEWAY / FOOTWAY RESURFACING AS PER HERCS 2023 APPENDIX 10 TYPE A
- PROPOSED CYCLEWAY / FOOTWAY NEW FULL DEPTH CONSTRUCTION AS PER HERCS 2023 APPENDIX 10 TYPE A
- PROPOSED CARRIAGEWAY RESURFACING AS PER HERCS 2023 APPENDIX 1
- PROPOSED RAISED TABLE EXTENSION
- PROPOSED IMPRINTED ASPHALT
- PROPOSED 800mm CORDUROY
- PROPOSED BUFF TACTILE PAVING
- PROPOSED ROAD MARKINGS
- EXISTING ROAD MARKING TO BE REMOVED THROUGH HYDROBLASTING
- PROPOSED BOLT DOWN TRAFFIC ISLAND
- PROPOSED TRAFFIC SIGN
- PROPOSED BOLLARD
- PROPOSED BELISHA BEACON
- HIGHWAY BOUNDARY
- WORK EXTENTS
- SETTING OUT REFERENCE LINE
- HB2 PROPOSED 125mm HB2 KERB - HERCS 2023 APPENDIX 4 KERB DETAIL
- DR PROPOSED 125MM TO 6MM DROPPER KERB
- BN PROPOSED BN 6MM DROPPED KERB
- TE PROPOSED TIMBER EDGING
- EF PROPOSED PCC EDGING KERB - HERCS 2023 APPENDIX 4 EDGING DETAIL
- Gy EXISTING GULLY
- Bg EXISTING KERB INLET
- 9.16 EXISTING LEVELS
- 9.16 PROPOSED LEVELS
- 1:30 PROPOSED CROSSFALL
- EXISTING REFLECTIVE STUDS TO BE TAKEN UP AND REMOVED TO TIP OFF SITE
- KERBS TO BE TAKEN UP AND REMOVED TO TIP OFF SITE

KEY TO HEALTH AND SAFETY SYMBOLS

- INDICATES A RESIDUAL RISK REQUIRING A COMPULSORY ACTION.
- INDICATES A RESIDUAL RISK FOR INFORMATION.
- INDICATES A RESIDUAL RISK REQUIRING A PROHIBITIVE ACTION.
- INDICATES A RESIDUAL RISK AS A WARNING.

IT SHOULD BE UNDERSTOOD THAT ALL DRAWINGS ARE ISSUED AS PRELIMINARY AND NOT FOR CONSTRUCTION. SHOULD THE CONTRACTOR AND / OR EMPLOYER COMMENCE WORK PRIOR TO APPROVAL BEING GIVEN, IT IS ENTIRELY AT THEIR OWN RISK

REV	DATE	BY	DESCRIPTION	CHK	APD
P01	20/12/2023	CB	ISSUED FOR CONSTRUCTION APPROVAL	ACC	

DRAWING STATUS: S4 - FOR APPROVAL

62-64 Hills Road, Cambridge, CB2 1LA, UK
T +44 (0) 1223 558 050, F +44 (0) 1223 558 051
www.wsp.com

CLIENT: GREATER CAMBRIDGE PARTNERSHIP

PROJECT: HORNINGSEA GREENWAY DETAILED DESIGN

TITLE: GENERAL ARRANGEMENT SHEET 01 OF 04

SCALE @ A1	DATE	DESIGN/DRAWN	CHECKED	APPROVED	SHEET
1:250	OCT 2023	CB	RVA	ACC	A1

WSP PROJECT NO. 70113562

DRAWING No. 3562-WSP-HS-XX-DR-CV-250101 REV. P01

C:\Users\UKCBB005\WSP OBO\70113562 - Horningsea Greenway detailed Design - Documents\03. WIP\Civil Engineering\03. Drawings\3562-WSP-HS-XX-DR-CV-250100.dwg 19 Dec, 2023 - 5:05pm

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T446: Design Risk Management Schedule

Project No	70113562	Project Name	Cambs JPSF - Horningsea Greenway Detailed Design

Guidance Notes *(see guidance notes page for more details)*

Design risk management should be an integral part of the overall design development and designers should think of it in terms of considering constructability, maintainability, etc. Designers only need to document their consideration of risks in this simple risk management schedule format. There is no requirement for quantitively design risk assessments to be carried out/documented and these should be avoided

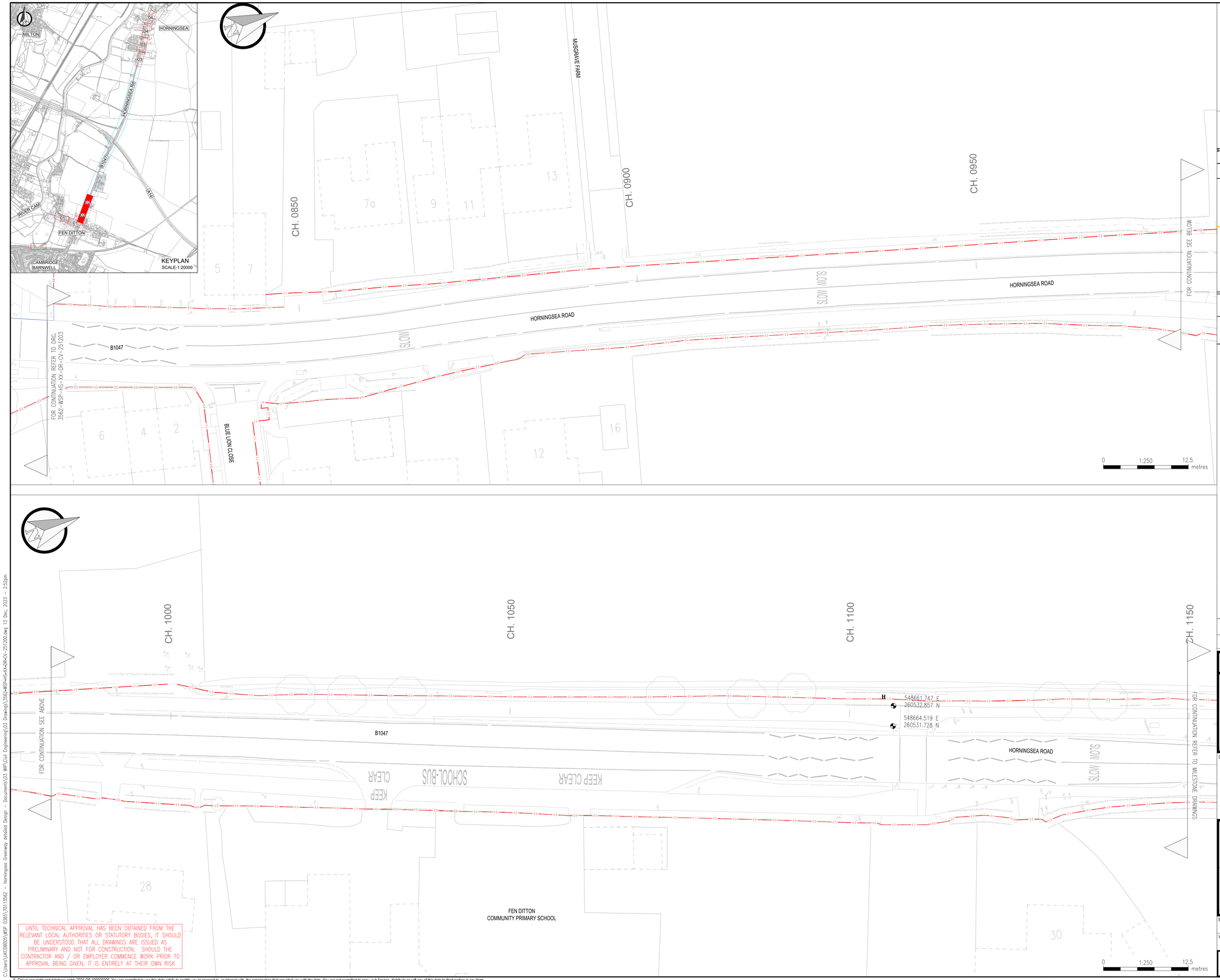
** Risks should be considered in a logical sequence relating to the location/operational environment, constructability/installability, operability (normal/emergency), maintainability (Inc. routine cleaning, replacement, etc.), and alteration/decommissioning/dismantling/demolition, and should be categorised against those headings,*

CIRIA guidance documents C755, C756, C686, C607, etc. provide a useful checklist and detailed guidance on the identification of risks to be considered during design and how those risks might be addressed - see detailed guidance notes for more details

§ Significant residual risks are those which are unusual, not obvious, difficult to manage, or where critical design assumptions apply. The documentation by designers of residual risks that cover well-known and understood hazards should be avoided.

Ref	Risk Category* & Phase where appropriate, *e.g. location/environment, construction, operation, maintenance, alteration/demolition*	Work Element/Location (where appropriate)	Hazard or Risk Issue Identified	Risk Management Owner	Design Eric Action Required *(e.g. hazard elimination/risk mitigation action, information to be provided to others)*	Significant Temporary Works Requirements/Management Arrangements and/or any Special Erection/Installation Sequences or Requirements	Design Action Status/Final Resolution Notes *(e.g. traceability of Eric action, communication of significant residual risk, critical design criteria, etc.)*	Significant Residual Risk	Date Logged/ Reviewed	Raised By
1	Construction	All	Private driveways/ businesses being inaccessible during the scheme's construction	Designer/Contractor	Access to driveways/ businesses to be provided at all times it is required. Suitable pedestrian routes to be provided to minimise potential for conflict between workforce, site visitors and plant movements. Early liaison with residents, businesses and all affected parties required in order to discuss phases of the works and access requirements.		Access to driveways/ businesses to be provided at all times it is required. Suitable pedestrian routes to be provided to minimise potential for conflict between workforce, site visitors and plant movements. Early liaison with residents, businesses and all affected parties required in order to discuss phases of the works and access requirements.	Yes	22/03/2023	Bogusia Day
2	Operation	All	Risk or injury to users of Greenways owing to potential conflict between cyclists/pedestrians during operation (i.e. on completion of works)	Lead Designer	Designer to take advice from cycling groups and adopt best practice. Compliance with design standard LTN 1/20 where possible - departures to be agreed with GCP and signed off.	None	Monitor and evaluate success through post completion RSA	Yes	22/03/2023	Bogusia Day
3	Construction/Operation/Maintenance	All	Risk of injury to Greenway users owing to defects developing in surfacing	Lead Designer	Materials to be designed/specified in accordance with HERCS and LTN1/20 - sealed surface preferable for rural sections of route.	Arrangements for safe access for maintenance plant to be considered - e.g. removable bollards	materials as per HERCS 2023	Yes	10/11/2023	Aitana Calvo Cousins
4	Demolition, Construction	All works	Injury to trespassers from onsite construction works, equipment and excavated areas	Principal Contractor	Hoarding/ fencing off of site and security measures such as scaffolding, detectors and CCTV where relevant	Safety barriers to be in place before works commence	Principal Contractor to provide suitable fencing and protection to the works site at all times	Yes	22/03/2023	Bogusia Day
5	Construction	Traffic Management	conflict between construction work and public	Contractor	Contractor to have a method of statement, and a material storage plan prior works commence. All working areas to be buried to avoid clashes with pedestrians, always ensuring off-street premises access. Maintain a minimum of 1.2 m free width footway at all times.	Safety barriers to be in place before works commence	Contractor to monitor barriers are in place once works commence and follow construction and storage plans. Contractor to keep working areas tidy to reduce H&S hazards.	Yes	22/03/2023	Bogusia Day
6	Operation	All works	Pedestrian / user access and circulation to take into account slopes for risk of slips, trips and falls	Principal Designer	Access and circulation routes designed to avoid steep slopes. Allow for level landings on graded routes inline with accessibility/DDA/inclusivity guidance.	Safety barriers to be in place before works commence	Gradients checked during detail design and it has been ensured that grading does not exceed 1:12	Yes	22/03/2023	Bogusia Day
7	Construction	Traffic Management	in order to construct the Build out safely and to avoid conflict with live traffic and pedestrians - temporary road closure would have to be provided	Contractor	Temporary traffic order regulation to be applied for road closure		TTRO to be applied for	Yes	13/11/2023	
8	Construction	Traffic Management	in order to construct the raised table extension safely and to avoid conflict with live traffic and pedestrians - temporary road closure would have to be provided	Contractor	Temporary traffic order regulation to be applied for road closure		TTRO to be applied for	Yes	27/11/2023	Rodrigo Vazquez Asenjo
9	Construction	Traffic Management	In order to construct the block paving resurfacing the western arm of the Church Street-High Street junction at Fen Ditton safely and to avoid conflict with live traffic - temporary road closure would have to be provided.	Contractor	Temporary traffic order regulation to be applied for road closure		TTRO to be applied for	Yes	27/11/2023	Rodrigo Vazquez Asenjo
10	Construction	All	Access to St. Mary the Virgin Church in Fen Ditton may be impeded throughout the construction of the resurfacing.	Contractor	Principal Contractor to minimise the construction time of this area and identify methods to deliver the work while still providing access to the church where feasible. Liaison with the church to be held to identify a time and date appropriate for construction	Safety barriers to be in place before works commence	Minimise potential for conflict between workforce, site visitors and plant movements. Early liaison with Church, residents, businesses and all affected parties required in order to discuss phases of the works and access requirements.	Yes	27/11/2023	Rodrigo Vazquez Asenjo
11	Operation	Traffic Management	Change in priority on the proposed parallel crossing	Designer/Contractor	Temporary traffic sign to "new layout ahead" to be added on either side of the junction		Temporary signage added	No	27/11/2023	Rodrigo Vazquez Asenjo
12	Operation	Traffic Management	Change in priority on the proposed parallel crossing	Designer/Contractor	Temporary traffic sign to "new layout ahead" to be added on either side of the junction		Temporary signage added	No	27/11/2023	Rodrigo Vazquez Asenjo

Issue 3.1



KEY

- PROPOSED SIGN
- EXISTING SIGN TO BE TAKEN DOWN AND REMOVED FOUNDATION TO BE BROKEN OUT AND LEVELLED TO FORMATION LEVEL
- EXISTING SIGN TO BE RETAINED AND PROTECTED FOR THE DURATION OF THE WORKS
- EXISTING SIGN PLATE TO BE RELOCATED
- PROPOSED BOLLARD
- PROPOSED KERBLINE

DIA REF	WIDTH (m)	COLOUR	LENGTH (m)	GAP (m)
1003A	0.200	WHITE	6.000	3
1004	0.100	WHITE	4.000	2
1009A	0.100	WHITE	0.600	0.300
1023A	1.250	WHITE	3.750	N/A
1057	0.750	WHITE	1.215	N/A
1018	0.075	YELLOW	N/A	N/A
1065	N/A	WHITE	4.300	N/A
1024	1.6	WHITE	N/A	N/A
1003	0.2	WHITE	N/A	1
1012.1	0.15	WHITE	N/A	N/A
1049	0.15	WHITE	N/A	N/A
1059	N/A	WHITE	1.000	N/A

NOTES

1. ALL DIMENSIONS ARE IN METRES UNLESS STATED OTHERWISE
2. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL RELATED DOCUMENTATION AND STANDARD DETAILS.
3. CONFLICTING INFORMATION SHOWN ON THE ENGINEER'S DRAWINGS OR DISCREPANCIES BETWEEN THE INFORMATION GIVEN BY THE DESIGNER AND THAT PROVIDED BY OTHERS MUST BE REFERRED TO THE DESIGNER BEFORE THE WORKS COMMENCE.
4. ALL TRAFFIC SIGNS AND ROAD MARKINGS TO BE IN ACCORDANCE WITH THE TRAFFIC SIGNS REGULATIONS AND GENERAL DIRECTIONS (TSRGD) 2016 AND CHAPTERS 1,3,4 & 5 OF THE TRAFFIC SIGNS MANUAL(TSM).
5. ALL ROAD MARKINGS TO BE THERMOPLASTIC MATERIAL IN ACCORDANCE WITH BS EN 1871 AND HAVE CLASS S3 SKID RESISTANCE IN ACCORDANCE WITH BS EN 1436. ALL WHITE ROAD MARKINGS TO HAVE REFLECTORISED GLASS BEADS IN ACCORDANCE WITH BS EN 1423 & BS EN 1424.
6. ROAD MARKINGS TO BE APPLIED USING THERMOPLASTIC PAINT AND SHALL ACHIEVE A MINIMUM 55 PSV UNLESS OTHERWISE STATED / AGREED IN WRITING WITH THE ADOPTING AUTHORITY.
7. WHEREVER PRACTICABLE SIGNS SHALL BE ERECTED/MOUNTED ON OTHER STREET FURNITURE (EG: LAMP COLUMNS) IN ORDER TO MINIMISE CLUTTER, AS INDICATED ON THE LAYOUT AND SIGNAGE SCHEDULE.
8. PRIOR TO EXCAVATION AND POURING OF ASSOCIATED FOUNDATIONS, THE CONTRACTOR SHALL AGREE THE FINAL LOCATIONS OF ALL SIGNS AND STREET FURNITURE WITH THE ADOPTING AUTHORITY.

REV	DATE	BY	DESCRIPTION	CHK	APD
P01	20/12/2023	CB	ISSUED FOR CONSTRUCTION APPROVAL	ACC	

DRAWING STATUS

S4 - FOR APPROVAL

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www.wsp.com

CLIENT

GREATER CAMBRIDGE PARTNERSHIP

PROJECT

HORNINGSEA GREENWAY DETAILED DESIGN

TITLE

PROPOSED TRAFFIC SIGNS & ROAD MARKINGS
SHEET 02 OF 04

SCALE @ A1	DATE	DESIGN/DRAWN	CHECKED	APPROVED	SHEET
1:250	29/03/2023	AS	AKM	ACC	A1

WSP PROJECT NO.

70113562

DRAWING No.

3562-WSP-HS-XX-DR-CV-251202

REV.

P01

UNTIL TECHNICAL APPROVAL HAS BEEN OBTAINED FROM THE RELEVANT LOCAL AUTHORITIES OR STATUTORY BODIES, IT SHOULD BE UNDERSTOOD THAT ALL DRAWINGS ARE ISSUED AS PRELIMINARY AND NOT FOR CONSTRUCTION. SHOULD THE CONTRACTOR AND / OR EMPLOYER COMMENCE WORK PRIOR TO APPROVAL BEING GIVEN, IT IS ENTIRELY AT THEIR OWN RISK

C:\Users\UKCDB005\WSP 0365\70113562 - Horningsea Greenway detailed Design - Documents\03 WSP Civil Engineering\03 Drawings\3562-WSP-HS-XX-DR-CV-251200.dwg 13 Dec, 2023 - 2:52pm

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Document & Drawing Issue Sheet

Project No:	70113562	**Issue No: 2**	
Project Name:	Horningsea Greenway - Detailed Design	Issuing Office:	
Date of Issue:	22-Dec-2023	62-64 Hills Road, Cambridge,	
Purpose of Issue:	For Approval	CB2 1LA	
Method of Issue	Email	Tel: +44 (0)1223 558050	
Number of items Issued:	13	wsp.com	
Format of Issue:	PDF		
Service:	CIVILS		

Issued to:	No of Recipients: 4	
Company	**Name**	**Position/Function**
GCP	Ben Hathway	Project Manager
GCP	Pamela Hawkins	Assistant Project Manager
Milestone Infrastructure	Dan Arnold	Site Agent
Milestone Infrastructure	Jeremy Collins	Contractor

Dwg/Doc Number	Title	Scale	Size	Revision
3562-WSP-HS-XX-DR-CV-250101	GENERAL ARRANGEMENT - SHEET 01 OF 04	1:250	A1	P01
3562-WSP-HS-XX-DR-CV-250102	GENERAL ARRANGEMENT - SHEET 02 OF 04	1:250	A1	P01
3562-WSP-HS-XX-DR-CV-251201	PROPOSED TRAFFIC SIGNS AND ROAD MARKINGS - SHEET 01 OF 04	1:250	A1	P01
3562-WSP-HS-XX-DR-CV-251202	PROPOSED TRAFFIC SIGNS AND ROAD MARKINGS - SHEET 02 OF 04	1:250	A1	P01
3562-WSP-HS-XX-DR-CV-251208	PROPOSED TRAFFIC SIGNS SCHEDULE - PHASE 2	N/A	A1	P01
3562-WSP-HS-XX-DR-CV-251209	PROPOSED TRAFFIC SIGN DETAILS - PHASE 2: SHEET 01 OF 02	1:250	A1	P01
3562-WSP-HS-XX-DR-CV-251210	PROPOSED TRAFFIC SIGN DETAILS - PHASE 2: SHEET 02 OF 02	1:250	A1	P01
3562-WSP-HS-XX-DR-CV-025950	TYPICAL CONSTRUCTION DETAIL	AS SHOWN	A1	P02
3562–WSP–HS–XX–DR–CV-100001	TRO PROPOSED 20MPH ZONE FEN DITTON HIGH ST	1:1000	A1	P01
3562–WSP–HS–XX–DR–CV-100002	TRO PROPOSED 20MPH ZONE HORNINGSEA ROAD - HIGH ST	1:1000	A1	P02
3562–WSP–HS–XX–DR–CV-100003	TRO PROPOSED PARALLEL CROSSING FEN DITTON	1:500	A1	P01
3562-WSP-HS-XX-RP-CM-PCI	PRE-CONSTRUCTION INFORMATION PACK	N/A	A4	P02
70113562 - Horningsea - TRO Notice	TRO Notice	N/A	A4	P01
70113562 - Horningsea - Speed Limit Order	Horningsea - Speed Limit Order	N/A	A4	P01
70113562 - Horningsea - Statement of Reasons	Statement of Reasons	N/A	A4	P01

Sign Reference	Diagram Number	x-height (mm)	Width (mm)	Height (mm)	Area (m^2)	Background Colour	Border Colour	Legend Colour	Mounting Height (mm)	Post Quantity	Post Type	Post Length (mm)	Base Type	Base Diameter (mm)	Base Depth (mm)	Base Volume (m^3)	Earth Cover (mm)	Illuminated	Further Details
FD01	619	N/A	450	450	0.16	White	Red	Black	2500	1	76.1 x 3.2 CHS	3450	Planted	300	600	0.04	100	No	Supplementary plate 'except for access'
FD02	Supplementary Plate	N/A	450	200	0.09	White	White	White	2300										
FD03	951	N/A	450	450	0.16	White	Red	Black	1500	1	76.1 x 3.2 CHS	2650	Planted	300	600	0.04	100	No	
FD04	950	N/A	680	600	0.24	White	Red	Black	2032	1	76.1 x 3.2 CHS	3562	Planted	300	600	0.04	100	No	Supplementary plate 'cycles crossing'
FD05	Proposed signs Greenway way-finding																		
FD06	675 - 20mph Zone Ends	50	750	1090	0.82	White	Black	Black	2300	1	76.1 x 3.2 CHS	4390	Bolted	350	900	0.09	100	No	FD06 mounted back to back with FD07
FD07	676 - 20mph Zone Starts	N/A	750	975	0.73	White	Black	Black	2300										
FD08	670 - 20mph Repeater	N/A	300	300	0.07	White	Red	Black	2300	1	76.1 x 3.2 CHS	3300	Bolted	300	600	0.04	100	No	FD08 mounted back to back with FD09
FD09	670 - 20mph Repeater	N/A	300	300	0.07	White	Red	Black	2300										
FD10	670 - 20mph Repeater	N/A	300	300	0.07	White	Red	Black	2300	1	76.1 x 3.2 CHS	3300	Bolted	300	600	0.04	100	No	FD10 mounted back to back with FD11
FD11	670 - 20mph Repeater	N/A	300	300	0.07	White	Red	Black	2300										
FD12	670 - 20mph Repeater	N/A	300	300	0.07	White	Red	Black	2300	1	76.1 x 3.2 CHS	3300	Bolted	300	600	0.04	100	No	FD12 mounted back to back with FD13
FD13	670 - 20mph Repeater	N/A	300	300	0.07	White	Red	Black	2300										
FD14	Proposed signs Greenway way-finding																		
FD15	Proposed signs Greenway way-finding																		
FD16	602 - Give Way	N/A	680	600	0.24	White	Red	Black	3400	1	76.1 x 3.2 CHS	4390	Bolted	350	900	0.09	100	No	FD16 & FD17 mounted back to back with FD18
FD17	675- 20mph Zone Ends	50	750	1090	0.82	White	Black	Black	2300										
FD18	674 - 20mph	50	750	975	0.73	White	Black	Black	2300										
FD19	Proposed signs Greenway way-finding																		
FD20	Proposed direction & distance sign																		
FD21	675 - 20mph Zone Ends	50	750	1090	0.82	White	Black	Black	2300	1	76.1 x 3.2 CHS	4390	Bolted	350	900	0.09	100	No	FD21 mounted back to back with FD22
FD22	676 - 20mph Zone Starts	N/A	750	975	0.73	White	Black	Black	2300										

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REV	DATE	BY	DESCRIPTION	CHK	APD
P01	20/12/2023	CB	ISSUED FOR CONSTRUCTION APPROVAL		ACC

DRAWING STATUS

S4 - FOR APPROVAL

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www.wsp.com

CLIENT

GREATER CAMBRIDGE PARTNERSHIP

PROJECT

HORNINGSEA GREENWAY DETAILED DESIGN

TITLE

PROPOSED TRAFFIC SIGNS SCHEDULE
PHASE 2

SCALE @ A1	DATE	DESIGN/DRAWN	CHECKED	APPROVED	SHEET
1:250	29/03/2023	AS	AKM	ACC	A1

WSP PROJECT NO.

70113562

DRAWING No.	REV.
3562-WSP-HS-XX-DR-CV-251208	P02

PROPOSED TRAFFIC SIGN TO 20MPH ZONE / 30MPH - 20MPH ZONE ENDS

IMPREXA UK IMPRINTED ASPHALT IN A STRETCHER BOND PATTERN OR SIMILAR APPROVED BY THE ENGINEER

LIMIT OF WORKS

PROPOSED QUIET STREET ENVIRONMENT

PROPOSED 20MPH SPEED LIMIT ON HIGH STREET

ST. MARY THE VIRGIN FEN DITTON

CHURCH STREET

PROPOSED STANDS FOR BICYCLE PARKING. EXISTING BIN TO BE RETAINED. EXISTING HEDGEROW TO BE RETAINED.

HIGH STREET

LIMIT OF WORKS

BN

HBN

TE

1.5

LP GAS

20

20

FOR CONTINUATION SEE BELOW

EXISTING BENCH TO BE RETAINED

EXISTING TELEGRAPH POLE AND OH CABLES

EXISTING TELEGRAPH POLE AND OH CABLES

EXISTING UTILITIES

CLOSES FOOTPATH

CH. 0500

CH. 0550

CH. 0600

CH. 0650

0 1:250 12.5 metres

INSET B

PARALLEL CROSSING SETTING OUT INFORMATION

DISTANCE TO SETTING OUT REFERENCE, EASTERN EDGE OF PROPERTY 3

2.3 3 4.5

12.43 12.54 12.57

12.49 12.58 12.61

12.38 12.47 12.50

8.3

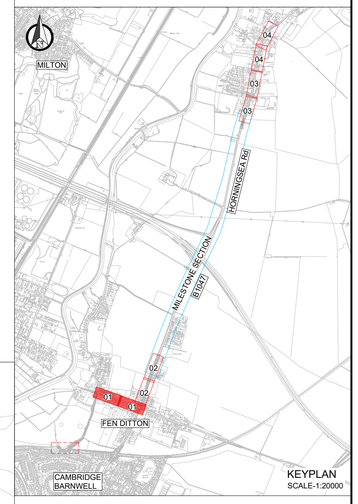
5.8 3.2

7.3

0 1:150 7.5 metres

NOTES

1. THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH ALL RELEVANT DOCUMENTATION, DRAWINGS AND STANDARD DETAILS.
2. IN ACCORDANCE WITH THE CDM REGULATIONS RESIDUAL RISKS OF SIGNIFICANCE ARE INDICATED ON THE GA DRAWING.
3. DIMENSIONS SHALL NOT BE SCALED FROM THIS DRAWING. ALL DIMENSIONS IN METRES UNLESS OTHERWISE STATED.
4. ALL PROPOSED SHARED USE PATHS AND FOOTWAY RESURFACING TO HAVE A MINIMUM CROSSFALL OF 1:40 .
5. DESIGN BASED ON TOPOGRAPHICAL SURVEYS "44990_S1_T_REV0" AND "44990_S2_T_REV0" FROM "GREENHATCH", DATED 31/08/2022 & 16/09/2022 RESPECTIVELY.
6. DESIGN BASED ON HIGHWAY BOUNDARY PROVIDED BY GREATER CAMBRIDGESHIRE PARTNERSHIP ON 17/03/2021 AND CONFIRMED THROUGH CONSULTATION ON DATE 29/06/2023.
7. REFER TO DRAWING SERIES: 3562-WSP-HS-XX-DR-CV-251200 FOR ROAD MARKINGS AND SIGNS STRATEGY.
8. REFER TO DRAWING SERIES: 3562-WSP-HS-XX-DR-CV-250900 FOR CROSS SECTIONS.
9. REFER TO DRAWING SERIES: 3562-WSP-HS-XX-DR-CV-250910 FOR STANDARD DETAILS.



PROPOSED QUIET STREET ENVIRONMENT

FOR CONTINUATION REFER TO DRG. 3562–WSP–HS–XX–DR–CV–250102

PROPOSED 20MPH SPEED LIMIT ON HIGH STREET

EXISTING TELEGRAPH POLE AND OH CABLES

FOR CONTINUATION SEE ABOVE

CH. 0700

CH. 0750

CH. 0800

HIGH STREET

PROPOSED SIGN TO 20MPH ZONE / 30MPH - 20MPH ZONE ENDS

INSET B

HORNINGSEA ROAD

KEEP CLEAR

HIGH DITCH ROAD

LIMIT OF WORKS

EXISTING RAISED TABLE TO BE EXTENDED

PROPOSED PARALLEL CROSSING, RAISED TABLE EXTENDED WEST BY 2.2m EXISTING TACTILE PAVING EITHER SIDE OF EXISTING UNCONTROLLED CROSSING TO BE TAKEN UP AND REMOVED TO TIP OFF SITE AND REPLACED BY RED TACTILE PAVING WITH APPLIED BALLONTINI

LIMIT OF WORKS

DITTON LANE

EXISTING TELEGRAPH POLE AND OH CABLES

0 1:250 12.5 metres

KEY

- PROPOSED CYCLEWAY / FOOTWAY RESURFACING AS PER HERCS 2023 APPENDIX 10 TYPE A
- PROPOSED CYCLEWAY / FOOTWAY NEW FULL DEPTH CONSTRUCTION AS PER HERCS 2023 APPENDIX 10 TYPE A
- PROPOSED CARRIAGEWAY RESURFACING AS PER HERCS 2023 APPENDIX 1
- PROPOSED RAISED TABLE EXTENSION
- PROPOSED IMPRINTED ASPHALT
- PROPOSED 800mm CORDUROY
- PROPOSED BUFF TACTILE PAVING
- PROPOSED ROAD MARKINGS
- EXISTING ROAD MARKING TO BE REMOVED THROUGH HYDROBLASTING
- PROPOSED BOLT DOWN TRAFFIC ISLAND
- PROPOSED TRAFFIC SIGN
- PROPOSED BOLLARD
- PROPOSED BELISHA BEACON
- HIGHWAY BOUNDARY
- WORK EXTENTS
- SETTING OUT REFERENCE LINE
- HB2 PROPOSED 125mm HB2 KERB - HERCS 2023 APPENDIX 4 KERB DETAIL
- DR PROPOSED 125MM TO 6MM DROPPER KERB
- BN PROPOSED BN 6MM DROPPED KERB
- TE PROPOSED TIMBER EDGING
- EF PROPOSED PCC EDGING KERB - HERCS 2023 APPENDIX 4 EDGING DETAIL
- Gy EXISTING GULLY
- Bg EXISTING KERB INLET
- 9.16 EXISTING LEVELS
- 9.16 PROPOSED LEVELS
- 1:30 PROPOSED CROSSFALL
- EXISTING REFLECTIVE STUDS TO BE TAKEN UP AND REMOVED TO TIP OFF SITE
- KERBS TO BE TAKEN UP AND REMOVED TO TIP OFF SITE

KEY TO HEALTH AND SAFETY SYMBOLS

- INDICATES A RESIDUAL RISK REQUIRING A COMPULSORY ACTION.
- INDICATES A RESIDUAL RISK FOR INFORMATION.
- INDICATES A RESIDUAL RISK REQUIRING A PROHIBITIVE ACTION.
- INDICATES A RESIDUAL RISK AS A WARNING.

IT SHOULD BE UNDERSTOOD THAT ALL DRAWINGS ARE ISSUED AS PRELIMINARY AND NOT FOR CONSTRUCTION. SHOULD THE CONTRACTOR AND / OR EMPLOYER COMMENCE WORK PRIOR TO APPROVAL BEING GIVEN, IT IS ENTIRELY AT THEIR OWN RISK

REV	DATE	BY	DESCRIPTION	CHK	APD
P01	20/12/2023	CB	ISSUED FOR CONSTRUCTION APPROVAL	ACC	

DRAWING STATUS: S4 - FOR APPROVAL

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CLIENT: GREATER CAMBRIDGE PARTNERSHIP

PROJECT: HORNINGSEA GREENWAY DETAILED DESIGN

TITLE: GENERAL ARRANGEMENT SHEET 01 OF 04

SCALE @ A1	DATE	DESIGN/DRAWN	CHECKED	APPROVED	SHEET
1:250	OCT 2023	CB	RVA	ACC	A1

WSP PROJECT NO. 70113562

DRAWING No. 3562-WSP-HS-XX-DR-CV-250101 REV. P01

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NO WORKS REQUIRED ALONG THIS SECTION

CH. 0850

CH. 0900

CH. 0950

MUSGRAVE FARM

HORNINGSEA ROAD

SLOW MOTS

FOR CONTINUATION SEE BELOW

FOR CONTINUATION REFER TO DRG. 3562-WSP-HS-XX-DR-CV-250101

BLUE LION CLOSE

0 1:250 12.5 metres

NO WORKS REQUIRED ALONG THIS SECTION

CH. 1000

CH. 1050

CH. 1100

CH. 1150

FOR CONTINUATION SEE ABOVE

B1047

HORNINGSEA ROAD

SLOW MOTS

KEEP CLEAR

SCHOOL BUS

KEEP CLEAR

548661.747 E
260532.857 N

548664.519 E
260531.728 N

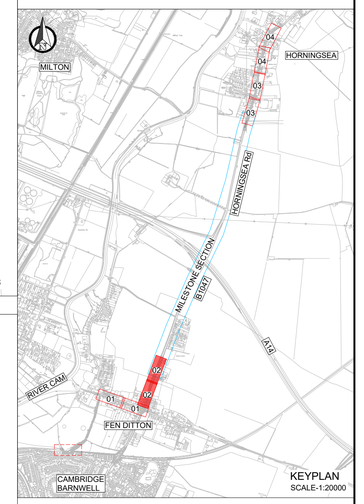
TIE-IN TO MILESTONE'S DESIGN

FOR CONTINUATION REFER TO MILESTONE DRAWING: 5020503-MIN-HGA-ZZ-DR-CH-0101-S2

0 1:250 12.5 metres

NOTES

1. THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH ALL RELEVANT DOCUMENTATION, DRAWINGS AND STANDARD DETAILS.
2. IN ACCORDANCE WITH THE CDM REGULATIONS RESIDUAL RISKS OF SIGNIFICANCE ARE INDICATED ON THE GA DRAWING.
3. DIMENSIONS SHALL NOT BE SCALED FROM THIS DRAWING. ALL DIMENSIONS IN METRES UNLESS OTHERWISE STATED.
4. ALL PROPOSED SHARED USE PATHS AND FOOTWAY RESURFACING TO HAVE A MINIMUM CROSSFALL OF 1:40 .
5. DESIGN BASED ON TOPOGRAPHICAL SURVEYS "44990_S1_T_REV0" AND "44990_S2_T_REV0" FROM "GREENHATCH", DATED 31/08/2022 & 16/09/2022 RESPECTIVELY.
6. DESIGN BASED ON HIGHWAY BOUNDARY PROVIDED BY GREATER CAMBRIDGESHIRE PARTNERSHIP ON 17/03/2021 AND CONFIRMED THROUGH CONSULTATION ON DATE 29/06/2023.
7. REFER TO DRAWING SERIES: 3562-WSP-HS-XX-DR-CV-251200 FOR ROAD MARKINGS AND SIGNS STRATEGY.
8. REFER TO DRAWING SERIES: 3562-WSP-HS-XX-DR-CV-250900 FOR CROSS SECTIONS.
9. REFER TO DRAWING SERIES: 3562-WSP-HS-XX-DR-CV-250910 FOR STANDARD DETAILS.



KEYPLAN
SCALE-1:20000

KEY

- PROPOSED CYCLEWAY / FOOTWAY RESURFACING AS PER HERCS 2023 APPENDIX 10 TYPE A
- PROPOSED CYCLEWAY / FOOTWAY NEW FULL DEPTH CONSTRUCTION AS PER HERCS 2023 APPENDIX 10 TYPE A
- PROPOSED CARRIAGEWAY RESURFACING AS PER HERCS 2023 APPENDIX 1
- PROPOSED RAISED TABLE EXTENSION
- PROPOSED BLOCK PAVING
- PROPOSED 800mm CORDUROY
- PROPOSED RED TACTILE PAVING
- PROPOSED ROAD MARKINGS
- EXISTING ROAD MARKING TO BE REMOVED THROUGH HYDROBLASTING
- PROPOSED BOLT DOWN TRAFFIC ISLAND
- PROPOSED TRAFFIC SIGN
- PROPOSED BOLLARD
- PROPOSED BELISHA BEACON
- HIGHWAY BOUNDARY
- WORK EXTENTS
- SETTING OUT REFERENCE LINE
- HB2 PROPOSED 125mm HB2 KERB - HERCS 2023 APPENDIX 4 KERB DETAIL
- DR PROPOSED 125MM TO 6MM DROPPER KERB
- BN PROPOSED BN 6MM DROPPED KERB
- TE PROPOSED TIMBER EDGING
- EF PROPOSED PCC EDGING KERB - HERCS 2023 APPENDIX 4 EDGING DETAIL
- Gy EXISTING GULLY
- Bg EXISTING KERB INLET
- 9.16 EXISTING LEVELS
- 9.16 PROPOSED LEVELS
- 1:30 PROPOSED CROSSFALL
- EXISTING REFLECTIVE STUDS TO BE TAKEN UP AND REMOVED TO TIP OFF SITE
- KERBS TO BE TAKEN UP AND REMOVED TO TIP OFF SITE

KEY TO HEALTH AND SAFETY SYMBOLS

	INDICATES A RESIDUAL RISK REQUIRING A COMPULSORY ACTION.
	INDICATES A RESIDUAL RISK FOR INFORMATION.
	INDICATES A RESIDUAL RISK REQUIRING A PROHIBITIVE ACTION.
	INDICATES A RESIDUAL RISK AS A WARNING.

IT SHOULD BE UNDERSTOOD THAT ALL DRAWINGS ARE ISSUED AS PRELIMINARY AND NOT FOR CONSTRUCTION. SHOULD THE CONTRACTOR AND / OR EMPLOYER COMMENCE WORK PRIOR TO APPROVAL BEING GIVEN, IT IS ENTIRELY AT THEIR OWN RISK

REV	DATE	BY	DESCRIPTION	CHK	APD
P01	20/12/2023	CB	ISSUED FOR CONSTRUCTION APPROVAL	ACC	

DRAWING STATUS
S4 - FOR APPROVAL

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www.wsp.com

CLIENT
GREATER CAMBRIDGE PARTNERSHIP

PROJECT
HORNINGSEA GREENWAY
DETAILED DESIGN

TITLE
GENERAL ARRANGEMENT
SHEET 02 OF 04

SCALE @ A1	DATE	DESIGN/DRAWN	CHECKED	APPROVED	SHEET
1:250	OCT 2023	CB	RVA	ACC	A1

WSP PROJECT NO.
70113562

DRAWING No.
3562-WSP-HS-XX-DR-CV-250102

REV.
P01

C:\Users\UKCDB0051\WSP 0365\70113562 - Horningsea Greenway detailed Design - Documents\03 WIP\Civil Engineering\03 Drawings\3562-WSP-HS-XX-DR-CV-250100.dwg 12 Dec, 2023 - 4:04pm

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PROPOSED SIGNS TO DIAG 676 REF FD07

PROPOSED SIGNS TO DIAG 675 REF FD06

LIMIT OF

PROPOSED SIGNS TO DIAG. 950 WITH SUB-PLATE "CYCLE CROSSING" REF FD04

PROPOSED SIGNS GREENWAY WAY-FINDING REF FD05

LIMIT OF WORKS

CH. 0500

EXISTING ROAD NAME SIGN TO BE RETAINED

PROPOSED SIGN TO DIAG 951 REF FD03

PROPOSED SIGN TO DIAG 619 WITH SUB-PLATE REF FD01 & FD02

CH. 0550

CH. 0600

CH. 0650

HIGH STREET

PROPOSED REPEATER SIGNS TO DIAG 670 (300) TO BE MOUNTED BACK TO BACK ON EXISTING LAMP COLUMN. EXACT LOCATION TO BE CONFIRMED ON SITE WITH CCC ENGINEER. REF FD08 & FD09

PROPOSED REPEATER SIGNS TO DIAG 670 (300) TO BE MOUNTED BACK TO BACK ON EXISTING LAMP COLUMN. EXACT LOCATION TO BE CONFIRMED ON SITE WITH CCC ENGINEER. REF FD10 & FD11

FOR CONTINUATION SEE BELOW

FOR CONTINUATION REFER TO DRG. 3562-WSP-HS-XX-DR-CV-251202

PROPOSED SIGN DIRECTION & DISTANCE SIGN REF FD20

PROPOSED SIGN GREENWAY WAY-FINDING REF FD19

B1047

EXISTING SIGNS TO DIAG 956 AND DIRECTION & DISTANCE SIGN. REF ES06 PROPOSED SIGN SOUTHBOUND TO DIAG 956 REF FD23

PROPOSED SIGNS TO DIAG 602 & 675 TO BE MOUNTED BACK TO BACK WITH SIGN TO DIAG 674. REF FD16, FD17 & FD18

EXISTING ROAD NAME SIGN TO BE RETAINED

PROPOSED SIGNS 2NO. GREENWAY WAY-FINDING TO BE MOUNTED BACK TO BACK REF FD14 & FD15

PROPOSED REPEATER SIGNS TO DIAG 670 (300) TO BE MOUNTED BACK TO BACK ON EXISTING LAMP COLUMN. EXACT LOCATION TO BE CONFIRMED ON SITE WITH CCC ENGINEER. REF FD12 & FD13

CH. 0700

CH. 0750

CH. 0800

HIGH STREET

FOR CONTINUATION SEE ABOVE

KEEP CLEAR

HIGH DITCH ROAD

LIMIT OF WORKS

EXISTING SIGNS TO DIAG 816 TO BE RETAINED

PROPOSED SIGNS TO DIAG 675 REF FD21

PROPOSED SIGNS TO DIAG 676 REF FD22

UNTIL TECHNICAL APPROVAL HAS BEEN OBTAINED FROM THE RELEVANT LOCAL AUTHORITIES OR STATUTORY BODIES, IT SHOULD BE UNDERSTOOD THAT ALL DRAWINGS ARE ISSUED AS PRELIMINARY AND NOT FOR CONSTRUCTION. SHOULD THE CONTRACTOR AND / OR EMPLOYER COMMENCE WORK PRIOR TO APPROVAL BEING GIVEN, IT IS ENTIRELY AT THEIR OWN RISK

KEYPLAN SCALE-1:20000

HORNINGSEA, MILTON, FEN DITTON, RIVER CAM, CAMBRIDGE, BARNWELL, A14, B1047, HORNINGSEA RD

KEY

- PROPOSED SIGN
- EXISTING SIGN TO BE TAKEN DOWN AND REMOVED FOUNDATION TO BE BROKEN OUT AND LEVELLED TO FORMATION LEVEL
- EXISTING SIGN TO BE RETAINED AND PROTECTED FOR THE DURATION OF THE WORKS
- EXISTING SIGN PLATE TO BE RELOCATED
- PROPOSED BOLLARD
- PROPOSED KERBLINE

DIA REF	WIDTH (m)	COLOUR	LENGTH (m)	GAP (m)
1003A	0.200	WHITE	6.000	3
1004	0.100	WHITE	4.000	2
1009A	0.100	WHITE	0.600	0.300
1023A	1.250	WHITE	3.750	N/A
1057	0.750	WHITE	1.215	N/A
1018	0.075	YELLOW	N/A	N/A
1065	N/A	WHITE	4.300	N/A
1024	1.6	WHITE	N/A	N/A
1003	0.2	WHITE	N/A	1
1012.1	0.15	WHITE	N/A	N/A
1049	0.15	WHITE	N/A	N/A
1059	N/A	WHITE	1.000	N/A

NOTES

1. ALL DIMENSIONS ARE IN METRES UNLESS STATED OTHERWISE
2. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL RELATED DOCUMENTATION AND STANDARD DETAILS.
3. CONFLICTING INFORMATION SHOWN ON THE ENGINEER'S DRAWINGS OR DISCREPANCIES BETWEEN THE INFORMATION GIVEN BY THE DESIGNER AND THAT PROVIDED BY OTHERS MUST BE REFERRED TO THE DESIGNER BEFORE THE WORKS COMMENCE.
4. ALL TRAFFIC SIGNS AND ROAD MARKINGS TO BE IN ACCORDANCE WITH THE TRAFFIC SIGNS REGULATIONS AND GENERAL DIRECTIONS (TSRGD) 2016 AND CHAPTERS 1,3,4 & 5 OF THE TRAFFIC SIGNS MANUAL(TSM).
5. ALL ROAD MARKINGS TO BE THERMOPLASTIC MATERIAL IN ACCORDANCE WITH BS EN 1871 AND HAVE CLASS S3 SKID RESISTANCE IN ACCORDANCE WITH BS EN 1436. ALL WHITE ROAD MARKINGS TO HAVE REFLECTORISED GLASS BEADS IN ACCORDANCE WITH BS EN 1423 & BS EN 1424.
6. ROAD MARKINGS TO BE APPLIED USING THERMOPLASTIC PAINT AND SHALL ACHIEVE A MINIMUM 55 PSV UNLESS OTHERWISE STATED / AGREED IN WRITING WITH THE ADOPTING AUTHORITY.
7. WHEREVER PRACTICABLE SIGNS SHALL BE ERECTED/MOUNTED ON OTHER STREET FURNITURE (EG: LAMP COLUMNS) IN ORDER TO MINIMISE CLUTTER, AS INDICATED ON THE LAYOUT AND SIGNAGE SCHEDULE.
8. PRIOR TO EXCAVATION AND POURING OF ASSOCIATED FOUNDATIONS, THE CONTRACTOR SHALL AGREE THE FINAL LOCATIONS OF ALL SIGNS AND STREET FURNITURE WITH THE ADOPTING AUTHORITY.

REV	DATE	BY	DESCRIPTION	CHK	APD
P01	20/12/2023	CB	ISSUED FOR CONSTRUCTION APPROVAL	ACC	

DRAWING STATUS: S2 - FOR INFORMATION

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www.wsp.com

CLIENT: GREATER CAMBRIDGE PARTNERSHIP

PROJECT: HORNINGSEA GREENWAY DETAILED DESIGN

TITLE: PROPOSED TRAFFIC SIGNS & ROAD MARKINGS SHEET 01 OF 04

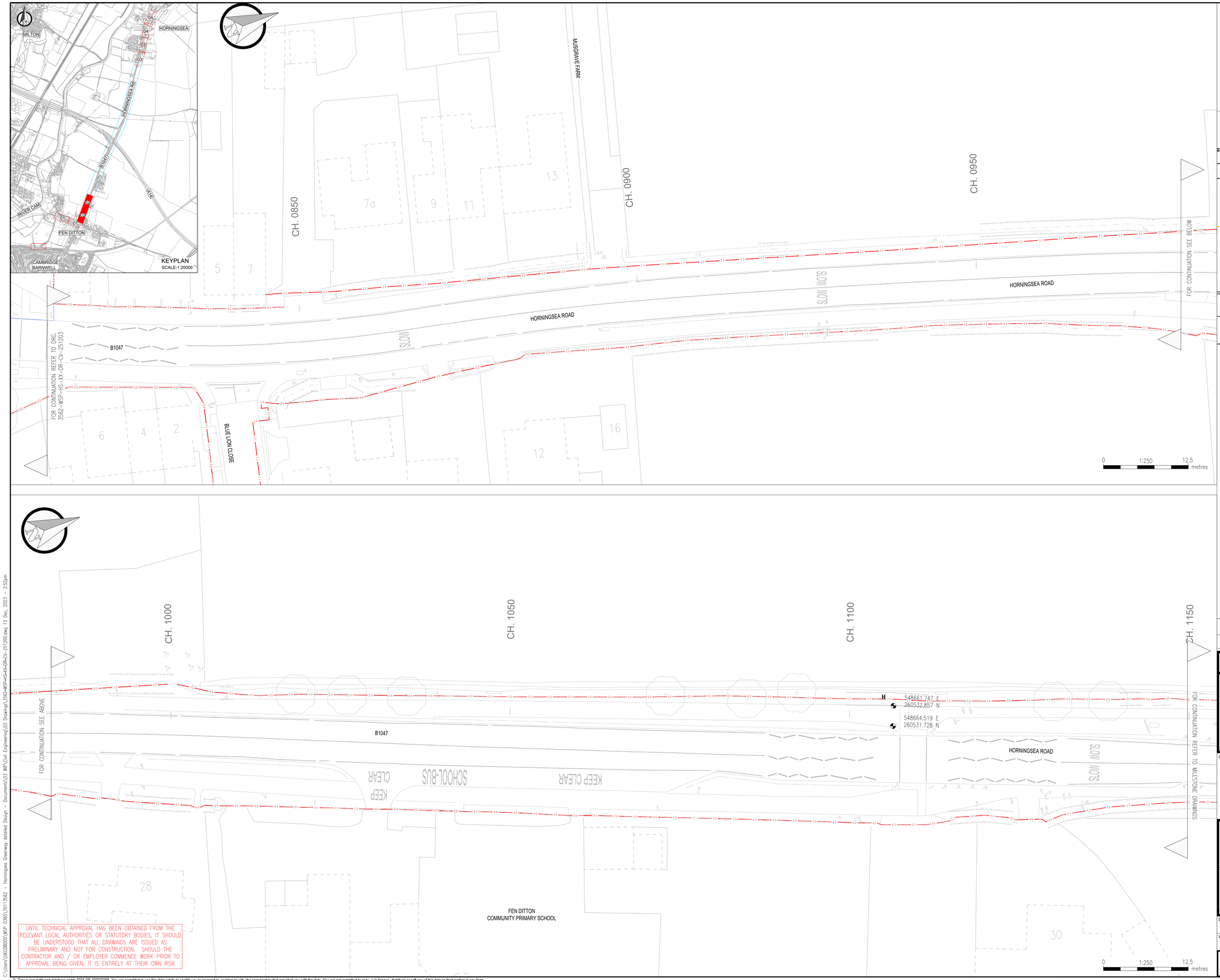
SCALE @ A1	DATE	DESIGN/DRAWN	CHECKED	APPROVED	SHEET
1:250	29/03/2023	AS	AKM	ACC	A1

WSP PROJECT NO. 70113562

DRAWING No. 3562-WSP-HS-XX-DR-CV-251201 REV. P01

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KEY

- PROPOSED SIGN
- EXISTING SIGN TO BE TAKEN DOWN AND REMOVED FOUNDATION TO BE BROKEN OUT AND LEVELLED TO FORMATION LEVEL
- EXISTING SIGN TO BE RETAINED AND PROTECTED FOR THE DURATION OF THE WORKS
- EXISTING SIGN PLATE TO BE RELOCATED
- PROPOSED BOLLARD
- PROPOSED KERBLINE

DIA REF	WIDTH (m)	COLOUR	LENGTH (m)	GAP (m)
1003A	0.200	WHITE	6.000	3
1004	0.100	WHITE	4.000	2
1009A	0.100	WHITE	0.600	0.300
1023A	1.250	WHITE	3.750	N/A
1057	0.750	WHITE	1.215	N/A
1018	0.075	YELLOW	N/A	N/A
1065	N/A	WHITE	4.300	N/A
1024	1.6	WHITE	N/A	N/A
1003	0.2	WHITE	N/A	1
1012.1	0.15	WHITE	N/A	N/A
1049	0.15	WHITE	N/A	N/A
1059	N/A	WHITE	1.000	N/A

NOTES

1. ALL DIMENSIONS ARE IN METRES UNLESS STATED OTHERWISE
2. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL RELATED DOCUMENTATION AND STANDARD DETAILS.
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5. ALL ROAD MARKINGS TO BE THERMOPLASTIC MATERIAL IN ACCORDANCE WITH BS EN 1871 AND HAVE CLASS S3 SKID RESISTANCE IN ACCORDANCE WITH BS EN 1436. ALL WHITE ROAD MARKINGS TO HAVE REFLECTORISED GLASS BEADS IN ACCORDANCE WITH BS EN 1423 & BS EN 1424.
6. ROAD MARKINGS TO BE APPLIED USING THERMOPLASTIC PAINT AND SHALL ACHIEVE A MINIMUM 55 PSV UNLESS OTHERWISE STATED / AGREED IN WRITING WITH THE ADOPTING AUTHORITY.
7. WHEREVER PRACTICABLE SIGNS SHALL BE ERECTED/MOUNTED ON OTHER STREET FURNITURE (EG: LAMP COLUMNS) IN ORDER TO MINIMISE CLUTTER, AS INDICATED ON THE LAYOUT AND SIGNAGE SCHEDULE.
8. PRIOR TO EXCAVATION AND POURING OF ASSOCIATED FOUNDATIONS, THE CONTRACTOR SHALL AGREE THE FINAL LOCATIONS OF ALL SIGNS AND STREET FURNITURE WITH THE ADOPTING AUTHORITY.

REV	DATE	BY	DESCRIPTION	CHK	APD
P01	20/12/2023	CB	ISSUED FOR CONSTRUCTION APPROVAL	ACC	

DRAWING STATUS

S4 - FOR APPROVAL

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CLIENT

GREATER CAMBRIDGE PARTNERSHIP

PROJECT

HORNINGSEA GREENWAY DETAILED DESIGN

TITLE

PROPOSED TRAFFIC SIGNS & ROAD MARKINGS
SHEET 02 OF 04

SCALE @ A1	DATE	DESIGN/DRAWN	CHECKED	APPROVED	SHEET
1:250	29/03/2023	AS	AKM	ACC	A1

WSP PROJECT NO.

70113562

DRAWING No.

3562-WSP-HS-XX-DR-CV-251202

REV.

P01

UNTIL TECHNICAL APPROVAL HAS BEEN OBTAINED FROM THE RELEVANT LOCAL AUTHORITIES OR STATUTORY BODIES, IT SHOULD BE UNDERSTOOD THAT ALL DRAWINGS ARE ISSUED AS PRELIMINARY AND NOT FOR CONSTRUCTION. SHOULD THE CONTRACTOR AND / OR EMPLOYER COMMENCE WORK PRIOR TO APPROVAL BEING GIVEN, IT IS ENTIRELY AT THEIR OWN RISK

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Sign Reference	Diagram Number	x-height (mm)	Width (mm)	Height (mm)	Area (m^2)	Background Colour	Border Colour	Legend Colour	Mounting Height (mm)	Post Quantity	Post Type	Post Length (mm)	Base Type	Base Diameter (mm)	Base Depth (mm)	Base Volume (m^3)	Earth Cover (mm)	Illuminated	Further Details
FD01	619	N/A	450	450	0.16	White	Red	Black	2500	1	76.1 x 3.2 CHS	3450	Planted	300	600	0.04	100	No	Supplementary plate 'except for access'
FD02	Supplementary Plate	N/A	450	200	0.09	White	White	White	2300										
FD03	951	N/A	450	450	0.16	White	Red	Black	1500	1	76.1 x 3.2 CHS	2650	Planted	300	600	0.04	100	No	
FD04	950	N/A	680	600	0.24	White	Red	Black	2032	1	76.1 x 3.2 CHS	3562	Planted	300	600	0.04	100	No	Supplementary plate 'cycles crossing'
FD05	Proposed signs Greenway way-finding																		
FD06	675 - 20mph Zone Ends	50	750	1090	0.82	White	Black	Black	2300	1	76.1 x 3.2 CHS	4390	Bolted	350	900	0.09	100	No	FD06 mounted back to back with FD07
FD07	676 - 20mph Zone Starts	N/A	750	975	0.73	White	Black	Black	2300										
FD08	670 - 20mph Repeater	N/A	300	300	0.07	White	Red	Black	2300	1	76.1 x 3.2 CHS	3300	Bolted	300	600	0.04	100	No	FD08 mounted back to back with FD09
FD09	670 - 20mph Repeater	N/A	300	300	0.07	White	Red	Black	2300										
FD10	670 - 20mph Repeater	N/A	300	300	0.07	White	Red	Black	2300	1	76.1 x 3.2 CHS	3300	Bolted	300	600	0.04	100	No	FD10 mounted back to back with FD11
FD11	670 - 20mph Repeater	N/A	300	300	0.07	White	Red	Black	2300										
FD12	670 - 20mph Repeater	N/A	300	300	0.07	White	Red	Black	2300	1	76.1 x 3.2 CHS	3300	Bolted	300	600	0.04	100	No	FD12 mounted back to back with FD13
FD13	670 - 20mph Repeater	N/A	300	300	0.07	White	Red	Black	2300										
FD14	Proposed signs Greenway way-finding																		
FD15	Proposed signs Greenway way-finding																		
FD16	602 - Give Way	N/A	680	600	0.24	White	Red	Black	3400	1	76.1 x 3.2 CHS	4390	Bolted	350	900	0.09	100	No	FD16 & FD17 mounted back to back with FD18
FD17	675- 20mph Zone Ends	50	750	1090	0.82	White	Black	Black	2300										
FD18	674 - 20mph	50	750	975	0.73	White	Black	Black	2300										
FD19	Proposed signs Greenway way-finding																		
FD20	Proposed direction & distance sign																		
FD21	675 - 20mph Zone Ends	50	750	1090	0.82	White	Black	Black	2300	1	76.1 x 3.2 CHS	4390	Bolted	350	900	0.09	100	No	FD21 mounted back to back with FD22
FD22	676 - 20mph Zone Starts	N/A	750	975	0.73	White	Black	Black	2300										

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REV	DATE	BY	DESCRIPTION	CHK	APD
P01	20/12/2023	CB	ISSUED FOR CONSTRUCTION APPROVAL		ACC

DRAWING STATUS

S4 - FOR APPROVAL

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www.wsp.com

CLIENT

GREATER CAMBRIDGE PARTNERSHIP

PROJECT

HORNINGSEA GREENWAY DETAILED DESIGN

TITLE

PROPOSED TRAFFIC SIGNS SCHEDULE
PHASE 2

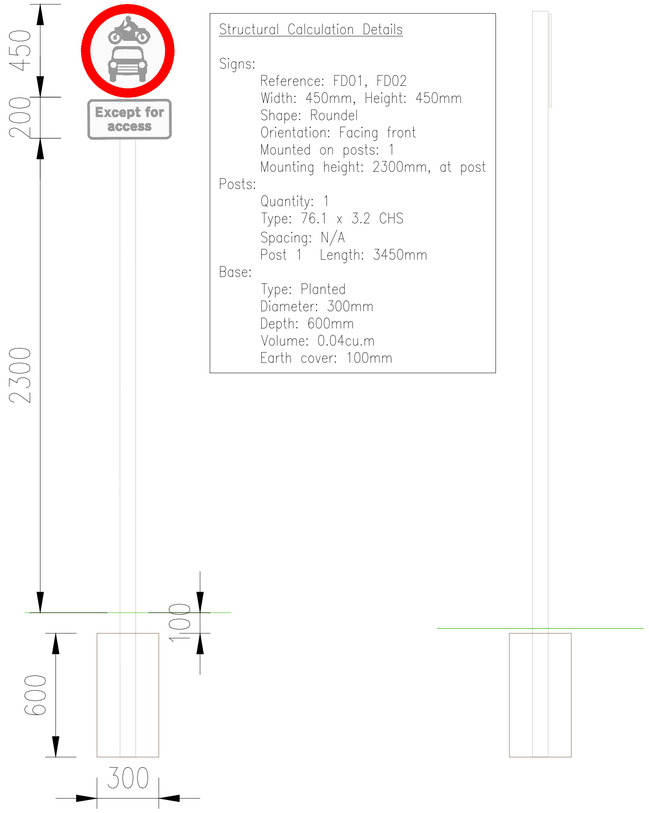
SCALE @ A1	DATE	DESIGN/DRAWN	CHECKED	APPROVED	SHEET
1:250	29/03/2023	AS	AKM	ACC	A1

WSP PROJECT NO.

70113562

DRAWING No.	REV.
3562-WSP-HS-XX-DR-CV-251208	P02

Signing Project	GREENWAYS				
Sign Reference	FD01	Width (mm)	450	Background	White
x Height		Height (mm)	450	Border	Red
Material	Class RA2	Area (sq.m)	0.16	Legend	Black



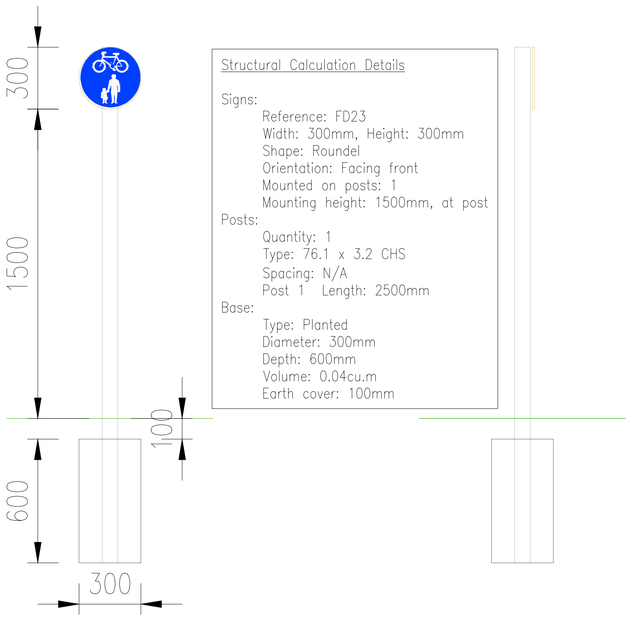
Structural Calculation Details

Signs:
- Reference: FD01, FD02
- Width: 450mm, Height: 450mm
- Shape: Roundel
- Orientation: Facing front
- Mounted on posts: 1
- Mounting height: 2300mm, at post

Posts:
- Quantity: 1
- Type: 76.1 x 3.2 CHS
- Spacing: N/A
- Post 1 Length: 3450mm

Base:
- Type: Planted
- Diameter: 300mm
- Depth: 600mm
- Volume: 0.04cu.m
- Earth cover: 100mm

Signing Project	GREENWAYS				
Sign Reference	FD23	Width (mm)	300	Background	Blue
x Height		Height (mm)	300	Border	White
Material	Class RA2	Area (sq.m)	0.07	Legend	White



Structural Calculation Details

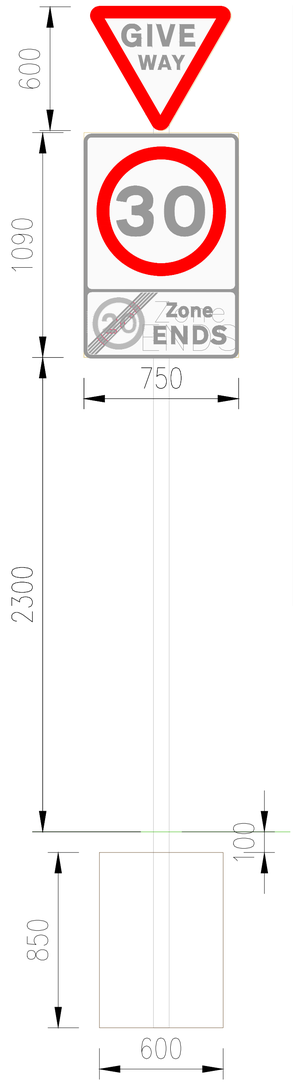
Signs:
- Reference: FD23
- Width: 300mm, Height: 300mm
- Shape: Roundel
- Orientation: Facing front
- Mounted on posts: 1
- Mounting height: 1500mm, at post

Posts:
- Quantity: 1
- Type: 76.1 x 3.2 CHS
- Spacing: N/A
- Post 1 Length: 2500mm

Base:
- Type: Planted
- Diameter: 300mm
- Depth: 600mm
- Volume: 0.04cu.m
- Earth cover: 100mm

Signing Project	GREENWAYS				
Sign Reference	FD16	Width (mm)	680	Background	White
x Height		Height (mm)	600	Border	Red
Material	Class RA2	Area (sq.m)	0.24	Legend	Black

Signing Project	GREENWAYS				
Sign Reference	FD17	Width (mm)	750	Background	White
x Height	50.0	Height (mm)	1090	Border	Black
Material	Class RA2	Area (sq.m)	0.82	Legend	Black



Structural Calculation Details

Signs:
- Reference: FD16
- Width: 680mm, Height: 600mm
- Shape: Inverted Triangle
- Orientation: Facing front
- Mounted on posts: 1
- Mounting height: 3400mm, at post

- Reference: FD17
- Width: 750mm, Height: 1090mm
- Shape: Rectangle
- Orientation: Facing front
- Mounted on posts: 1
- Mounting height: 2300mm, at post

- Reference: FD18
- Width: 750mm, Height: 975mm
- Shape: Rectangle
- Orientation: Facing back
- Mounted on posts: 1
- Mounting height: 2300mm, at post

Posts:
- Quantity: 1
- Type: 76.1 x 3.2 CHS
- Spacing: N/A
- Post 1 Length: 4950mm

Base:
- Type: Planted
- Diameter: 600mm
- Depth: 850mm
- Volume: 0.24cu.m
- Earth cover: 100mm

Signing Project	GREENWAYS				
Sign Reference	FD18	Width (mm)	750	Background	White
x Height	50.0	Height (mm)	975	Border	Black
Material	Class RA2	Area (sq.m)	0.73	Legend	Black



Signing Project	Horningsea Greenway				
Sign Reference	670	Width (mm)	300	Background	White
x Height		Height (mm)	300	Border	Red
Material	Class RA2	Area (sq.m)	0.07	Legend	Black



Structural Calculation Details

Signs:
- Reference: FD08, FD09, FD10, FD11, FD12, FD13
- Width: 300mm, Height: 300mm
- Shape: Roundel
- Mounted back to back on Existing Lamp Columns

UNTIL TECHNICAL APPROVAL HAS BEEN OBTAINED FROM THE RELEVANT LOCAL AUTHORITIES OR STATUTORY BODIES, IT SHOULD BE UNDERSTOOD THAT ALL DRAWINGS ARE ISSUED AS PRELIMINARY AND NOT FOR CONSTRUCTION. SHOULD THE CONTRACTOR AND / OR EMPLOYER COMMENCE WORK PRIOR TO APPROVAL BEING GIVEN, IT IS ENTIRELY AT THEIR OWN RISK

REV	DATE	BY	DESCRIPTION	CHK	APD
P01	20/12/2023	CB	ISSUED FOR CONSTRUCTION APPROVAL		ACC

DRAWING STATUS
S4 - FOR APPROVAL

wsp
62-64 Hills Road, Cambridge, CB2 1LA, UK
T +44 (0) 1223 558 050, F +44 (0) 1223 558 051
www.wsp.com

CLIENT
GREATER CAMBRIDGE PARTNERSHIP

PROJECT
HORNINGSEA GREENWAY DETAILED DESIGN

TITLE
PROPOSED TRAFFIC SIGN DETAILS - PHASE 2
SHEET 01 OF 02

SCALE @ A1	DATE	DESIGN/DRAWN	CHECKED	APPROVED	SHEET
1:250	29/03/2023	AS	AKM	ACC	A1

WSP PROJECT NO.
70113562

DRAWING No.
3562-WSP-HS-XX-DR-CV-251209

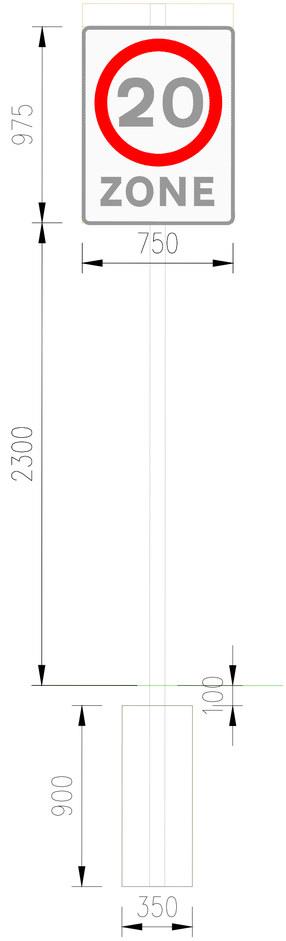
REV.
P01

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Signing Project	Horningsea Greenway				
Sign Reference	674	Width (mm)	750	Background	White
x Height	50.0	Height (mm)	975	Border	Black
Material	Class RA2	Area (sq.m)	0.73	Legend	Black

Signing Project	Horningsea Greenway				
Sign Reference	675	Width (mm)	750	Background	White
x Height	50.0	Height (mm)	1090	Border	Black
Material	Class RA2	Area (sq.m)	0.82	Legend	Black



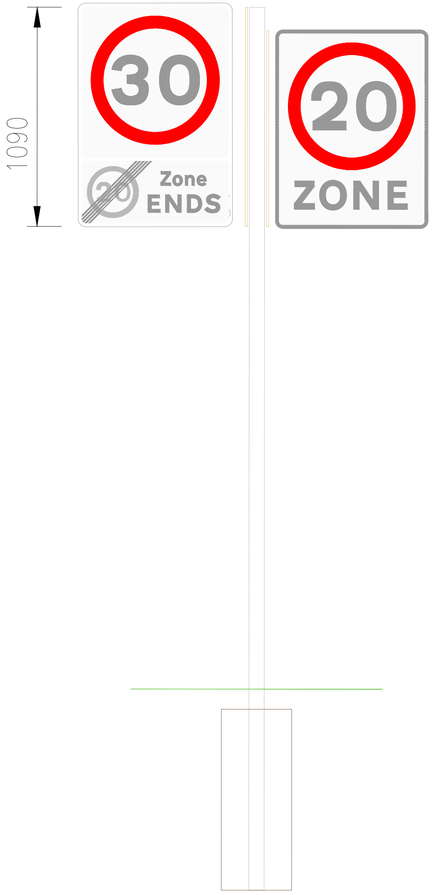
Structural Calculation Details

Signs:
- Reference: FD07, FD22
- Width: 750mm, Height: 975mm
- Shape: Rectangle
- Orientation: Facing front
- Mounted on posts: 1
- Mounting height: 2300mm, at post

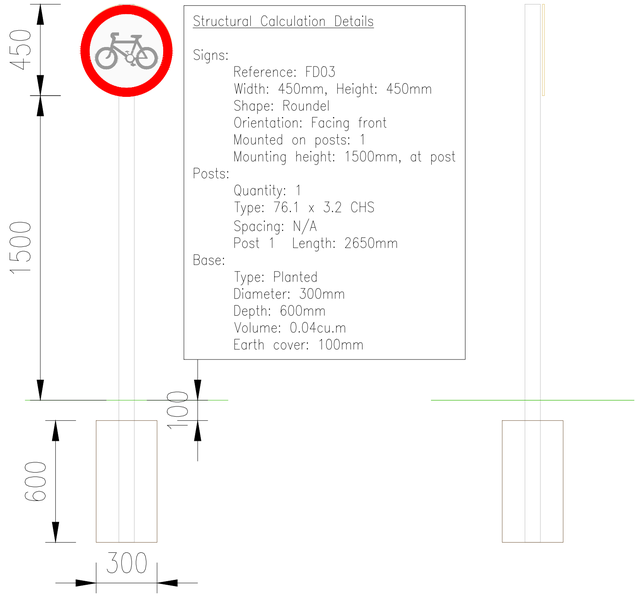
- Reference: FD06, FD21
- Width: 750mm, Height: 1090mm
- Shape: Rectangle
- Orientation: Facing back
- Mounted on posts: 1
- Mounting height: 2300mm, at post

Posts:
- Quantity: 1
- Type: 76.1 x 3.2 CHS (S355)
- Spacing: N/A
- Post 1 Length: 4390mm

Base:
- Type: Planted
- Diameter: 350mm
- Depth: 900mm
- Volume: 0.09cu.m
- Earth cover: 100mm



Signing Project	GREENWAYS				
Sign Reference	FD03	Width (mm)	450	Background	White
x Height		Height (mm)	450	Border	Red
Material	Class RA2	Area (sq.m)	0.16	Legend	Black

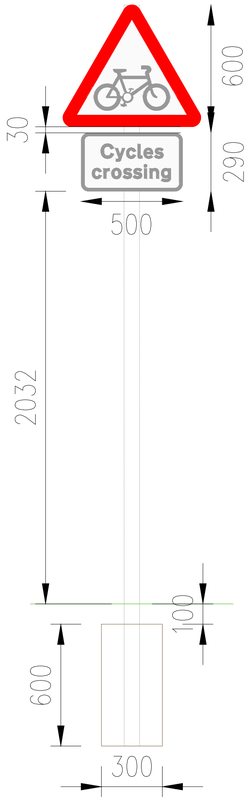


Structural Calculation Details

Signs:
- Reference: FD03
- Width: 450mm, Height: 450mm
- Shape: Roundel
- Orientation: Facing front
- Mounted on posts: 1
- Mounting height: 1500mm, at post

Posts:
- Quantity: 1
- Type: 76.1 x 3.2 CHS
- Spacing: N/A
- Post 1 Length: 2650mm

Base:
- Type: Planted
- Diameter: 300mm
- Depth: 600mm
- Volume: 0.04cu.m
- Earth cover: 100mm



Signing Project	GREENWAYS				
Sign Reference	FD04	Width (mm)	680	Background	White
x Height		Height (mm)	600	Border	Red
Material	Class RA2	Area (sq.m)	0.24	Legend	Black

Signing Project	GREENWAYS				
Sign Reference		Width (mm)	500	Background	White
x Height	50.0	Height (mm)	290	Border	Black
Material	Class RA2	Area (sq.m)	0.14	Legend	Black

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REV	DATE	BY	DESCRIPTION	CHK	APD
P01	20/12/2023	CB	ISSUED FOR CONSTRUCTION APPROVAL	ACC	

DRAWING STATUS
S4 - FOR APPROVAL

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CLIENT
GREATER CAMBRIDGE PARTNERSHIP

PROJECT
HORNINGSEA GREENWAY DETAILED DESIGN

TITLE
PROPOSED TRAFFIC SIGN DETAILS - PHASE 2
SHEET 02 OF 02

SCALE @ A1	DATE	DESIGN/DRAWN	CHECKED	APPROVED	SHEET
1:250	29/03/2023	AS	AKM	ACC	A1

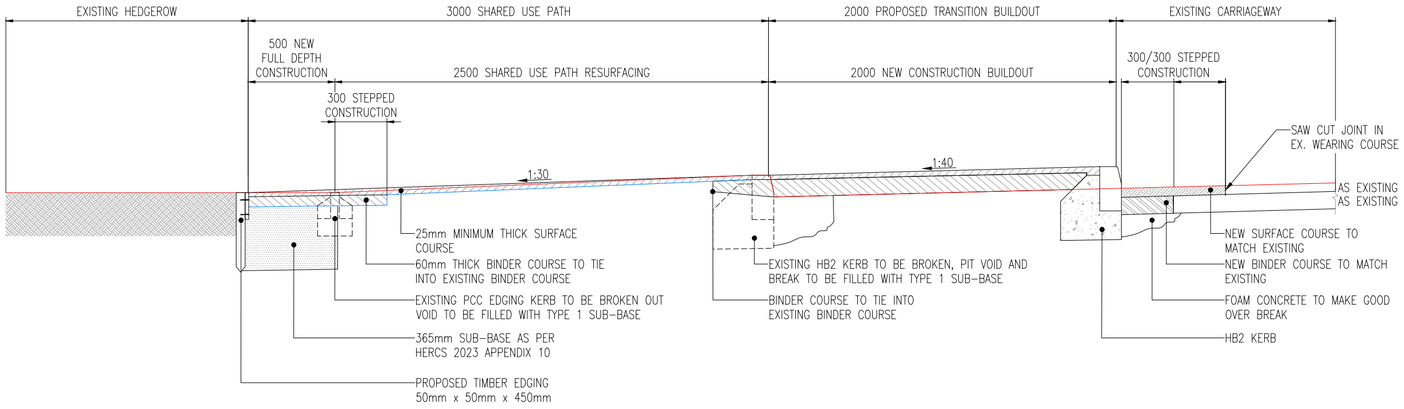
WSP PROJECT NO.
70113562

DRAWING No.
3562-WSP-HS-XX-DR-CV-251210

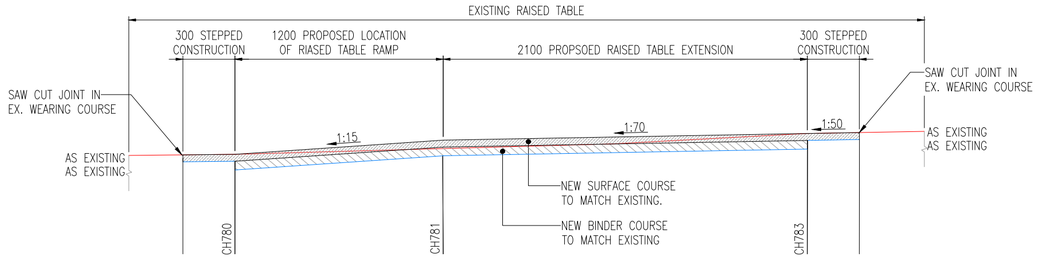
REV.
P01

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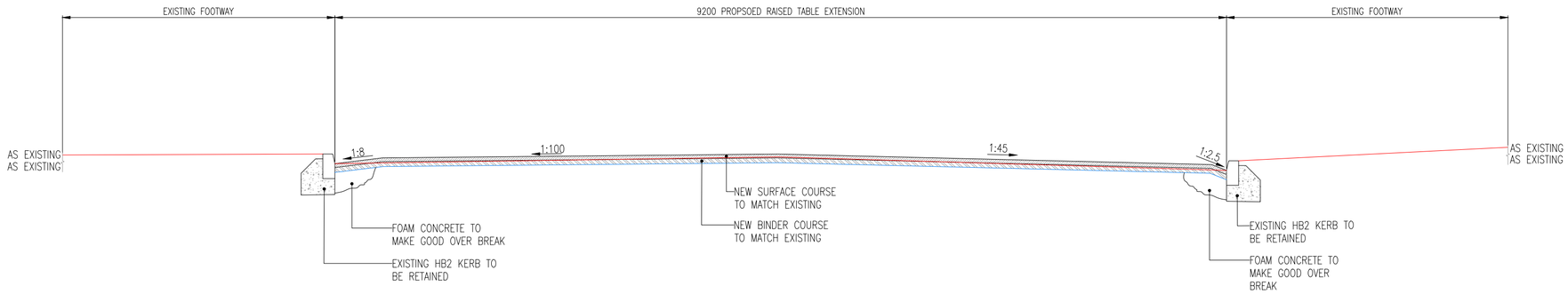
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TYPICAL CROSS SECTION AT CHAINAGE 2820
SCALE – 1:25



TYPICAL LONG SECTION AT CHAINAGE 775–785
SCALE – 1:25



TYPICAL CROSS SECTION AT CHAINAGE 780
SCALE – 1:40

DO NOT SCALE

KEY

EXISTING GROUND PROFILE

SURFACE PLANE OFF

NOTES

1. THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH ALL RELEVANT DOCUMENTATION, DRAWINGS AND STANDARD DETAILS.
2. DIMENSIONS SHALL NOT BE SCALED FROM THIS DRAWING. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE STATED.
3. DESIGN BASED ON TOPOGRAPHICAL SURVEYS "44990_S1_T_REV0" AND "44990_S2_T_REV0" FROM "GREENHATCH", DATED 31/08/2022 & 16/09/2022 RESPECTIVELY.
4. REFER TO DRAWING SERIES 3562-WSP-HS-XX-DR-CV-250100 FOR GENERAL ARRANGEMENT.
5. REFER TO DRAWING SERIES 3562-WSP-HS-XX-DR-CV-251200 FOR ROAD MARKINGS AND SIGNS.
6. REFER TO DRAIWNG SERIES 3562-WSP-HS-XX-DR-CV-050900 FOR STANDARD DETAILS.
7. ALL DESIGN TO BE IN ACCORDANCE WITH HERCS 2023 GUIDANCE DOCUMENT UNLESS OTHERWISE SPECIFIED

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REV	DATE	BY	DESCRIPTION	CHK	APP
P02	20/12/2023	CB	DETAILS PROVIDED FOR RAISED TABLE EXTENSION	ACC	
P01	14/11/2023	RVA	ISSUE FOR CONSTRUCTION APPROVAL	AKM	LMM

DRAWING STATUS: S4 - FOR APPROVAL

wsp
62-64 Hills Road, Cambridge, CB2 1LA, UK
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wsp.com

GREATER CAMBRIDGE PARTNERSHIP

PROJECT: HORNINGSEA GREENWAY DETAILED DESIGN

TITLE: TYPICAL CROSS SECTIONS & LONG SECTION

SCALE @ A2:	CHECKED:		APPROVED:
AS SHOWN	ACC		AKM
PROJECT No:	DESIGNED:	DRAWN:	DATE:
70113562	RVA	RVA	December 23

DRAWING No: 3562-WSP-HS-XX-DR-CV-025950 REV: P02

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File name C:\USERS\UKCDB005\WSP O365\70113562 - HORNINGSEA GREENWAY DETAILED DESIGN - DOCUMENTS\03 WIP\CIVIL ENGINEERING\03 DRAWINGS\3562-WSP-HS-XX-DR-CV-025950.DWG, printed on 20 December 2023 15:33:02, by Bushell, Cameron

NO WORKS REQUIRED ALONG THIS SECTION

CH. 0850

CH. 0900

CH. 0950

MUSGRAVE FARM

HORNINGSEA ROAD

SLOW MOTS

FOR CONTINUATION SEE BELOW

FOR CONTINUATION REFER TO DRG. 3562-WSP-HS-XX-DR-CV-250101

BLUE LION CLOSE

0 1:250 12.5 metres

NO WORKS REQUIRED ALONG THIS SECTION

CH. 1000

CH. 1050

CH. 1100

CH. 1150

FOR CONTINUATION SEE ABOVE

B1047

HORNINGSEA ROAD

SLOW MOTS

KEEP CLEAR

SCHOOL BUS

KEEP CLEAR

548661.747 E
260532.857 N

548664.519 E
260531.728 N

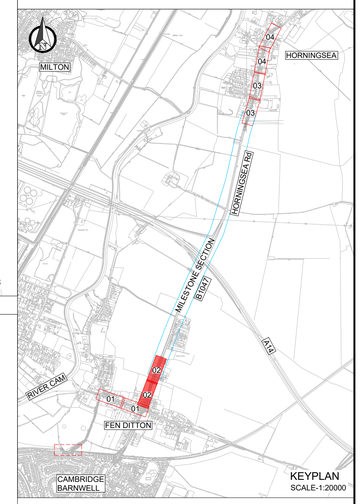
TIE-IN TO MILESTONE'S DESIGN

FOR CONTINUATION REFER TO MILESTONE DRAWING: 5020503-MIN-HGA-ZZ-DR-CH-0101-S2

0 1:250 12.5 metres

NOTES

1. THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH ALL RELEVANT DOCUMENTATION, DRAWINGS AND STANDARD DETAILS.
2. IN ACCORDANCE WITH THE CDM REGULATIONS RESIDUAL RISKS OF SIGNIFICANCE ARE INDICATED ON THE GA DRAWING.
3. DIMENSIONS SHALL NOT BE SCALED FROM THIS DRAWING. ALL DIMENSIONS IN METRES UNLESS OTHERWISE STATED.
4. ALL PROPOSED SHARED USE PATHS AND FOOTWAY RESURFACING TO HAVE A MINIMUM CROSSFALL OF 1:40 .
5. DESIGN BASED ON TOPOGRAPHICAL SURVEYS "44990_S1_T_REV0" AND "44990_S2_T_REV0" FROM "GREENHATCH", DATED 31/08/2022 & 16/09/2022 RESPECTIVELY.
6. DESIGN BASED ON HIGHWAY BOUNDARY PROVIDED BY GREATER CAMBRIDGESHIRE PARTNERSHIP ON 17/03/2021 AND CONFIRMED THROUGH CONSULTATION ON DATE 29/06/2023.
7. REFER TO DRAWING SERIES: 3562-WSP-HS-XX-DR-CV-251200 FOR ROAD MARKINGS AND SIGNS STRATEGY.
8. REFER TO DRAWING SERIES: 3562-WSP-HS-XX-DR-CV-250900 FOR CROSS SECTIONS.
9. REFER TO DRAWING SERIES: 3562-WSP-HS-XX-DR-CV-250910 FOR STANDARD DETAILS.



KEYPLAN
SCALE-1:20000

KEY

- PROPOSED CYCLEWAY / FOOTWAY RESURFACING AS PER HERCS 2023 APPENDIX 10 TYPE A
- PROPOSED CYCLEWAY / FOOTWAY NEW FULL DEPTH CONSTRUCTION AS PER HERCS 2023 APPENDIX 10 TYPE A
- PROPOSED CARRIAGEWAY RESURFACING AS PER HERCS 2023 APPENDIX 1
- PROPOSED RAISED TABLE EXTENSION
- PROPOSED BLOCK PAVING
- PROPOSED 800mm CORDUROY
- PROPOSED RED TACTILE PAVING
- PROPOSED ROAD MARKINGS
- EXISTING ROAD MARKING TO BE REMOVED THROUGH HYDROBLASTING
- PROPOSED BOLT DOWN TRAFFIC ISLAND
- PROPOSED TRAFFIC SIGN
- PROPOSED BOLLARD
- PROPOSED BELISHA BEACON
- HIGHWAY BOUNDARY
- WORK EXTENTS
- SETTING OUT REFERENCE LINE
- HB2 PROPOSED 125mm HB2 KERB - HERCS 2023 APPENDIX 4 KERB DETAIL
- DR PROPOSED 125MM TO 6MM DROPPER KERB
- BN PROPOSED BN 6MM DROPPED KERB
- TE PROPOSED TIMBER EDGING
- EF PROPOSED PCC EDGING KERB - HERCS 2023 APPENDIX 4 EDGING DETAIL
- Gy EXISTING GULLY
- Bg EXISTING KERB INLET
- 9.16 EXISTING LEVELS
- 9.16 PROPOSED LEVELS
- 1:30 PROPOSED CROSSFALL
- EXISTING REFLECTIVE STUDS TO BE TAKEN UP AND REMOVED TO TIP OFF SITE
- KERBS TO BE TAKEN UP AND REMOVED TO TIP OFF SITE

KEY TO HEALTH AND SAFETY SYMBOLS

	INDICATES A RESIDUAL RISK REQUIRING A COMPULSORY ACTION.
	INDICATES A RESIDUAL RISK FOR INFORMATION.
	INDICATES A RESIDUAL RISK REQUIRING A PROHIBITIVE ACTION.
	INDICATES A RESIDUAL RISK AS A WARNING.

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REV	DATE	BY	DESCRIPTION	CHK	APD
P01	20/12/2023	CB	ISSUED FOR CONSTRUCTION APPROVAL	ACC	

DRAWING STATUS
S4 - FOR APPROVAL

62-64 Hills Road, Cambridge, CB2 1LA, UK
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www.wsp.com

CLIENT
GREATER CAMBRIDGE PARTNERSHIP

PROJECT
HORNINGSEA GREENWAY
DETAILED DESIGN

TITLE
GENERAL ARRANGEMENT
SHEET 02 OF 04

SCALE @ A1	DATE	DESIGN/DRAWN	CHECKED	APPROVED	SHEET
1:250	OCT 2023	CB	RVA	ACC	A1

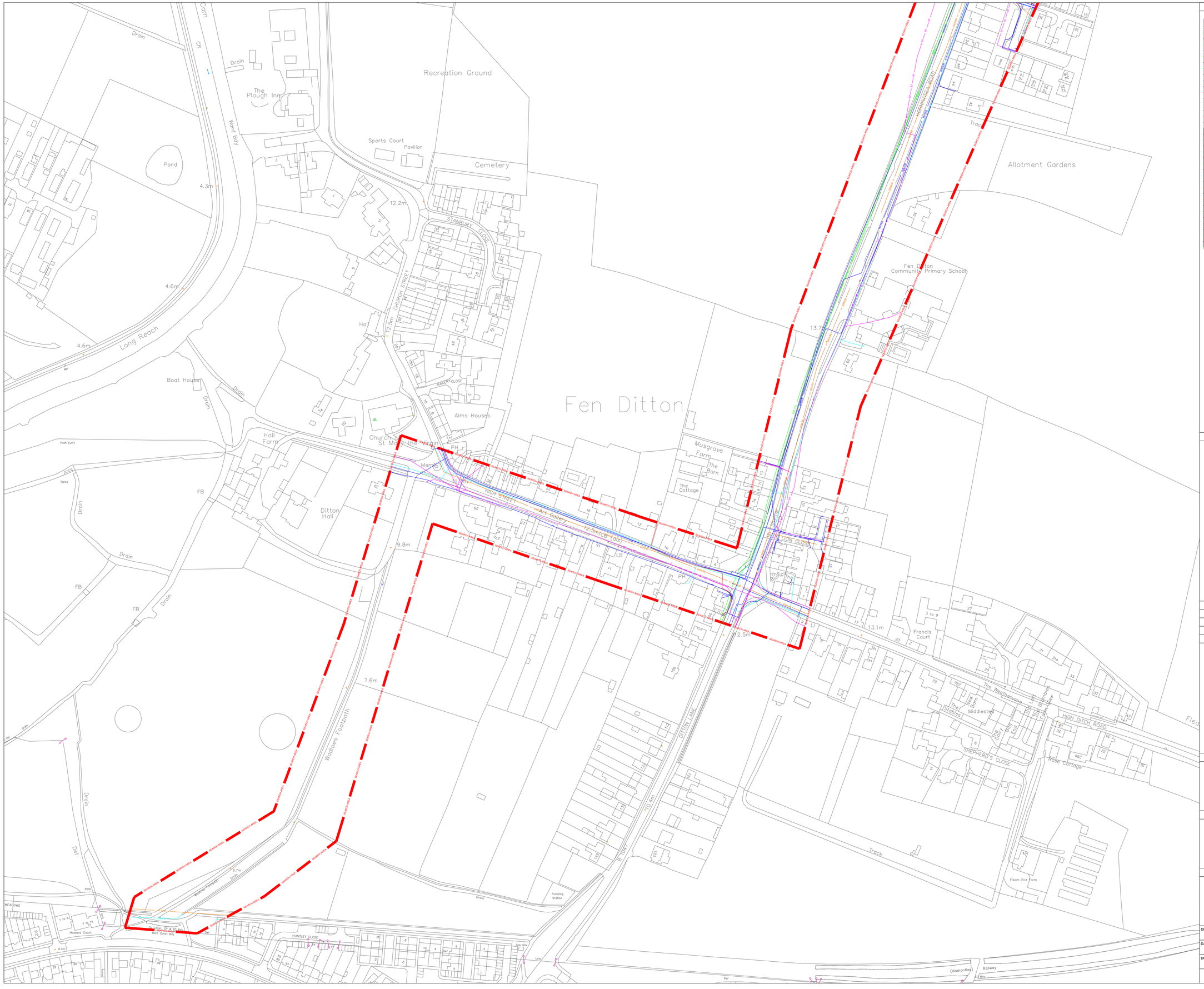
WSP PROJECT NO.
70113562

DRAWING No.
3562-WSP-HS-XX-DR-CV-250102

REV.
P01

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KEY

BT	BT	KCOM	KCOM
CL	CENTURY LINK	KPN	KPN
COLT	COLT	LON LND	LU POWERLINK
CITYFIBRE	CITY FIBRE	SEARCH AREA	SEARCH AREA
CSP FIBRE	CSP FIBRE	SEWER >>	FW SEWER
LV	LV ELEC	SEWER >>	SW SEWER
HV	HV ELEC	SEWER >>	COM SEWER
EHV	EHV ELEC	BSKYB	SKY
ENERGETICS	ENERGETICS UK	SSE TEL	SSE TELECOM
ES PIPELINES	ES PIPELINES	TATA	TATA
EU NETWORKS	EU NETWORKS	TELENT	TELENT
FULCRUM	FULCRUM	TFL	TFL
GAMMA	GAMMA	VERIZON	VERIZON
LP GAS	GAS - LP	VIRGIN	VIRGIN
MP GAS	GAS - MP	VODAFONE	VODAFONE
IP GAS	GAS - IP	WATER	WATER
HP GAS	GAS - HP	ZAYO	ZAYO
GTC	GTC	G-NET	G NETWORK
GTT	GTT		
INSTALCOM	INSTALCOM		

LINES MAY INDICATE MULTIPLE ASSETS

NOTES:

- **THIS DRAWING IS A REPRESENTATIVE "FUSION PLAN" COMPILED FROM PLANS PROVIDED BY ASSET OWNING ORGANISATIONS WHOSE PLANT OR ASSETS COULD BE AFFECTED BY WORKS UNDERTAKEN ON THE SITE DETAILED HEREIN.**
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- **CABLES TO STREET LIGHTING, ROAD SIGNS AND ILLUMINATED BOLLARDS ARE NOT ALWAYS SHOWN BUT MUST BE ASSUMED TO EXIST.**
- **THE LOCATION OF ANY MAINS AND SERVICES MUST BE LOCATED USING EML OR GPR SURVEYS FOLLOWED, IF REQUIRED BY HAND DUG TRIAL HOLES. BEFORE USING ANY MECHANICAL PLANT YOU MUST OBTAIN APPROVAL FROM THE APPROPRIATE UTILITY.**
- **UNDERGROUND SERVICES MUST BE LOCATED IN ACCORDANCE WITH HSE GUIDANCE NOTE HS (G) 47 AND BSI's PAS 128 2014.**

REV	REVISION DETAILS	DATE

centara
Bureau Services
1-2 Woodside Court, Normanton Business Park
Normanton, West Yorkshire, WF6 1SB
www.centara-ltd.com tel: 01924 220726

PROJECT

Horningsea 4km

CLIENT

wsp

DRAWING TITLE

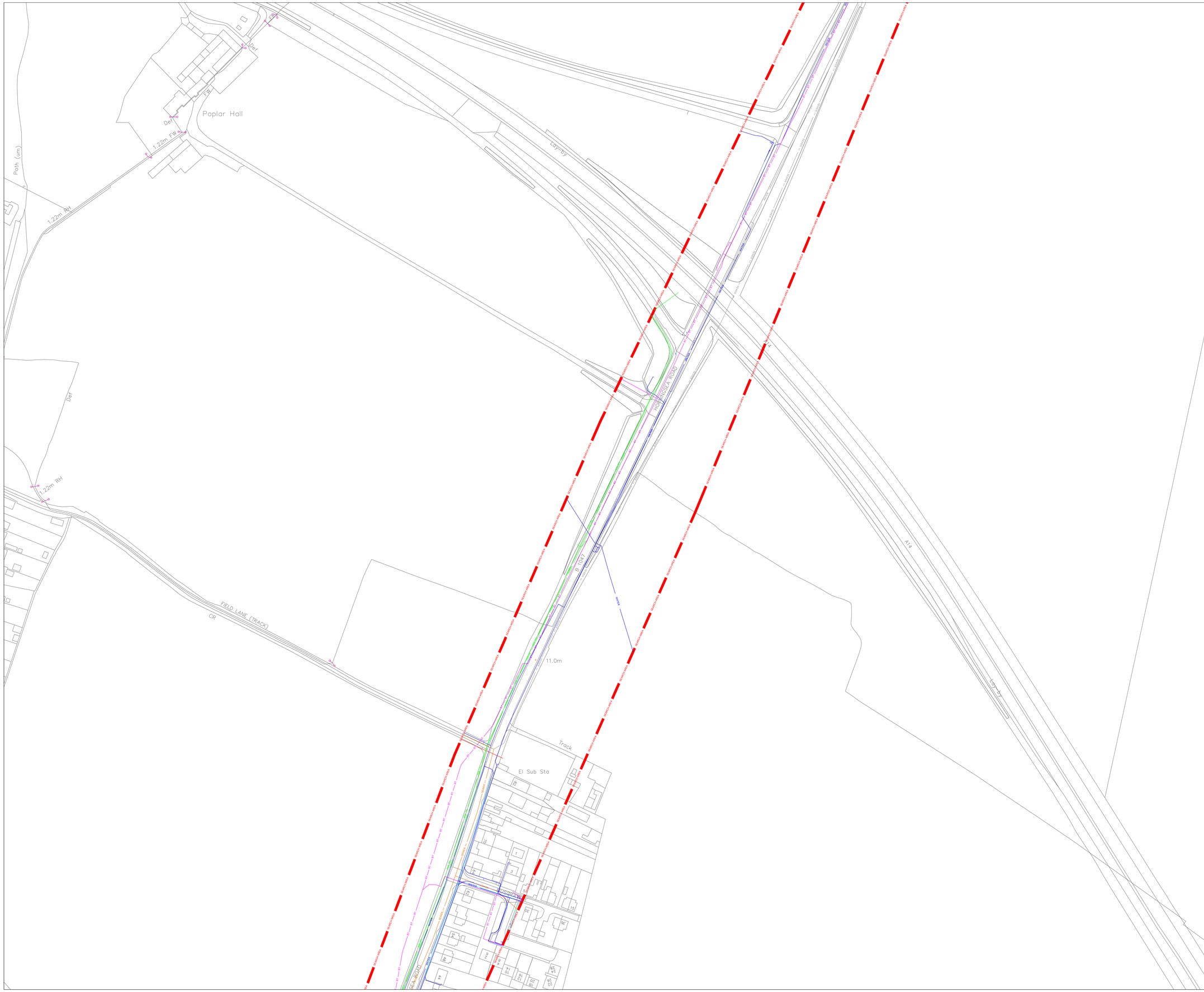
FUSION PLAN

DRAWN BY:	CHECKED BY:	REQUESTED BY:
J.Reape	C.Cockerham	A.Malecki

DATE:	SCALE:
03/08/2022	1:1000 @ A0

DRAWING NUMBER:	REVISION:
CEN22168	A

SHEET 01 of 04



KEY

BT	BT	KCOM	KCOM
CL	CENTURY LINK	KPN	KPN
COLT	COLT	LON LND	LU POWERLINK
CITYFIBRE	CITY FIBRE	SEARCH AREA	SEARCH AREA
CSP FIBRE	CSP FIBRE	SEWER >>	FW SEWER
LV	LV ELEC	SEWER >>	SW SEWER
HV	HV ELEC	SEWER >>	COM SEWER
EHV	EHV ELEC	BSKYB	SKY
ENERGETICS	ENERGETICS UK	SSE TEL	SSE TELECOM
ES PIPELINES	ES PIPELINES	TATA	TATA
EU NETWORKS	EU NETWORKS	TELENT	TELENT
FULCRUM	FULCRUM	TFL	TFL
GAMMA	GAMMA	VERIZON	VERIZON
LP GAS	GAS - LP	VIRGIN	VIRGIN
MP GAS	GAS - MP	VODAFONE	VODAFONE
IP GAS	GAS - IP	WATER	WATER
HP GAS	GAS - HP	ZAYO	ZAYO
GTC	GTC	G-NET	G NETWORK
GTT	GTT		
INSTALCOM	INSTALCOM		

LINES MAY INDICATE MULTIPLE ASSETS

NOTES:

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- **UNDERGROUND SERVICES MUST BE LOCATED IN ACCORDANCE WITH HSE GUIDANCE NOTE HS (G) 47 AND BSI's PAS 128 2014.**

REV	REVISION DETAILS	DATE

centara
Bureau Services
1-2 Woodside Court, Normanton Business Park
Normanton, West Yorkshire, WF6 1SB
www.centara-ltd.com tel: 01924 220726

PROJECT

Horningsea 4km

CLIENT

wsp

DRAWING TITLE

FUSION PLAN

DRAWN BY:	CHECKED BY:	REQUESTED BY:
J.Reape	C.Cockerham	A.Malecki

DATE:	SCALE:
03/08/2022	1:1000 @ A0

DRAWING NUMBER:	REVISION:
CEN22168	A



KEY

BT	BT	KCOM	KCOM
CL	CENTURY LINK	KPN	KPN
COLT	COLT	LON UND	LU POWERLINK
CITYFIBRE	CITY FIBRE	SEARCH AREA	SEARCH AREA
CSP FIBRE	CSP FIBRE	SEWER >>	FW SEWER
LV	LV ELEC	SEWER >>	SW SEWER
HV	HV ELEC	SEWER >>	COM SEWER
EHV	EHV ELEC	BSKYB	SKY
ENERGETICS	ENERGETICS UK	BSE TEL	SSE TELECOM
ES PIPELINES	ES PIPELINES	TATA	TATA
EU NETWORKS	EU NETWORKS	TELENT	TELENT
FULCRUM	FULCRUM	TFL	TFL
GAMMA	GAMMA	VERIZON	VERIZON
LP GAS	GAS - LP	VIRGIN	VIRGIN
MP GAS	GAS - MP	VODAFONE	VODAFONE
IP GAS	GAS - IP	WATER	WATER
HP GAS	GAS - HP	ZAYO	ZAYO
GTC	GTC	G-NET	G NETWORK
GTT	GTT		
INSTALCOM	INSTALCOM		

LINES MAY INDICATE MULTIPLE ASSETS

NOTES:

- **THIS DRAWING IS A REPRESENTATIVE "FUSION PLAN" COMPILED FROM PLANS PROVIDED BY ASSET OWNING ORGANISATIONS WHOSE PLANT OR ASSETS COULD BE AFFECTED BY WORKS UNDERTAKEN ON THE SITE DETAILED HEREIN.**
- **DO NOT SCALE FROM THIS DRAWING**
- **THE INFORMATION PROVIDED ON THIS MAPPING PLAN IS BASED ON HISTORIC RECORDS PROVIDED BY THE STATUTORY UNDERTAKERS. THE ACTUAL POSITION AND STATUS OF ANY MAINS AND SERVICES MUST BE VERIFIED ON SITE. THIS PLAN IS FOR INFORMATION PURPOSES ONLY.**
- **THE INFORMATION ON THIS PLAN IS GIVEN WITHOUT OBLIGATION OR WARRANTY. NO LIABILITY OF ANY KIND WHATSOEVER IS ACCEPTED BY CENTARA LTD, OUR AGENTS OR PARTNERS FOR ANY ERRORS OR OMISSIONS.**
- **SERVICES TO BUILDINGS ARE NOT ALWAYS SHOWN BUT IT MUST BE ASSUMED THAT ANY EXISTING BUILDING IS SERVED WITH "LIVE" SUPPLIES UNTIL PROVEN OTHERWISE. YOU MUST OBTAIN WRITTEN CONFIRMATION FROM THE RELEVANT UTILITY THAT A SUPPLY IS "DEAD".**
- **CABLES TO STREET LIGHTING, ROAD SIGNS AND ILLUMINATED BOLLARDS ARE NOT ALWAYS SHOWN BUT MUST BE ASSUMED TO EXIST.**
- **THE LOCATION OF ANY MAINS AND SERVICES MUST BE LOCATED USING EML OR GPR SURVEYS FOLLOWED, IF REQUIRED BY HAND DUG TRIAL HOLES. BEFORE USING ANY MECHANICAL PLANT YOU MUST OBTAIN APPROVAL FROM THE APPROPRIATE UTILITY.**
- **UNDERGROUND SERVICES MUST BE LOCATED IN ACCORDANCE WITH HSE GUIDANCE NOTE HS (G) 47 AND BSI's PAS 128 2014.**

REV	REVISION DETAILS	DATE

centara
Bureau Services
1-2 Woodside Court, Normanton Business Park
Normanton, West Yorkshire, WF6 1SB
www.centara-ltd.com tel: 01924 220726

PROJECT

Horningsea 4km

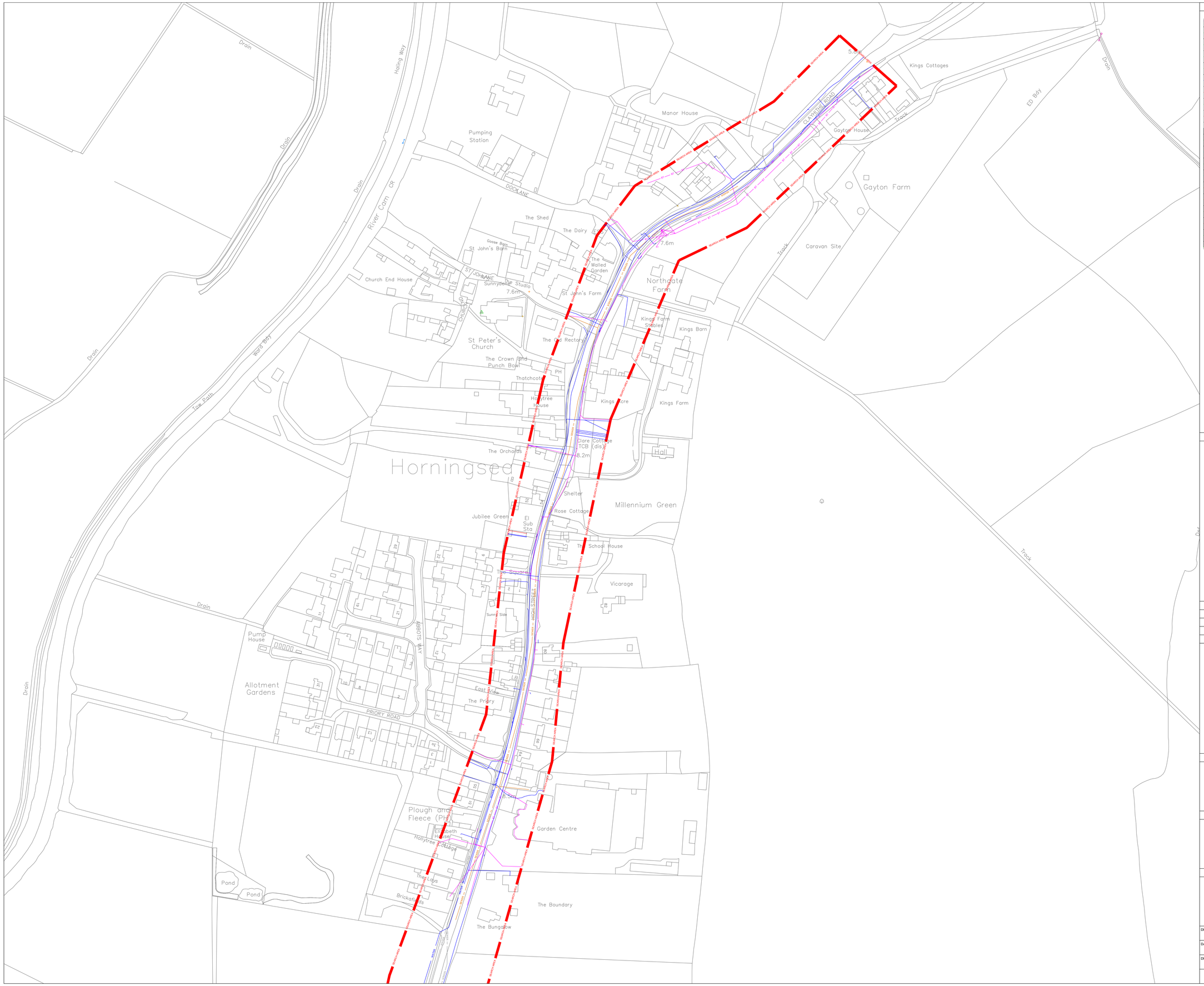
CLIENT

wsp

DRAWING TITLE

FUSION PLAN

DRAWN BY:	CHECKED BY:	REQUESTED BY:
J.Reape	C.Cockerham	A.Malecki
DATE: 03/08/2022		SCALE: 1:1000 @ A0
DRAWING NUMBER: CEN22168		REVISION: A



KEY

BT	BT	KCOM	KCOM
CL	CENTURY LINK	KPN	KPN
COLT	COLT	LON UND	LU POWERLINK
CITYFIBRE	CITY FIBRE	SEARCH AREA	SEARCH AREA
CSP FIBRE	CSP FIBRE	SEWER >>	FW SEWER
LV	LV ELEC	SEWER >>	SW SEWER
HV	HV ELEC	SEWER >>	COM SEWER
EHV	EHV ELEC	BSKYB	SKY
ENERGETICS	ENERGETICS UK	BSE TEL	SSE TELECOM
ES PIPELINES	ES PIPELINES	TATA	TATA
EU NETWORKS	EU NETWORKS	TELENT	TELENT
FULCRUM	FULCRUM	TFL	TFL
GAMMA	GAMMA	VERIZON	VERIZON
LP GAS	GAS - LP	VIRGIN	VIRGIN
MP GAS	GAS - MP	VODAFONE	VODAFONE
IP GAS	GAS - IP	WATER	WATER
HP GAS	GAS - HP	ZAYO	ZAYO
GTC	GTC	G-NET	G NETWORK
GTT	GTT		
INSTALCOM	INSTALCOM		

LINES MAY INDICATE MULTIPLE ASSETS

NOTES:

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- **UNDERGROUND SERVICES MUST BE LOCATED IN ACCORDANCE WITH HSE GUIDANCE NOTE HS (G) 47 AND BSI's PAS 128 2014.**

REV	REVISION DETAILS	DATE

centara
Bureau Services
1-2 Woodside Court, Normanton Business Park
Normanton, West Yorkshire, WF6 1SB
www.centara-ltd.com tel: 01924 220726

PROJECT

Horningsea 4km

CLIENT

wsp

DRAWING TITLE

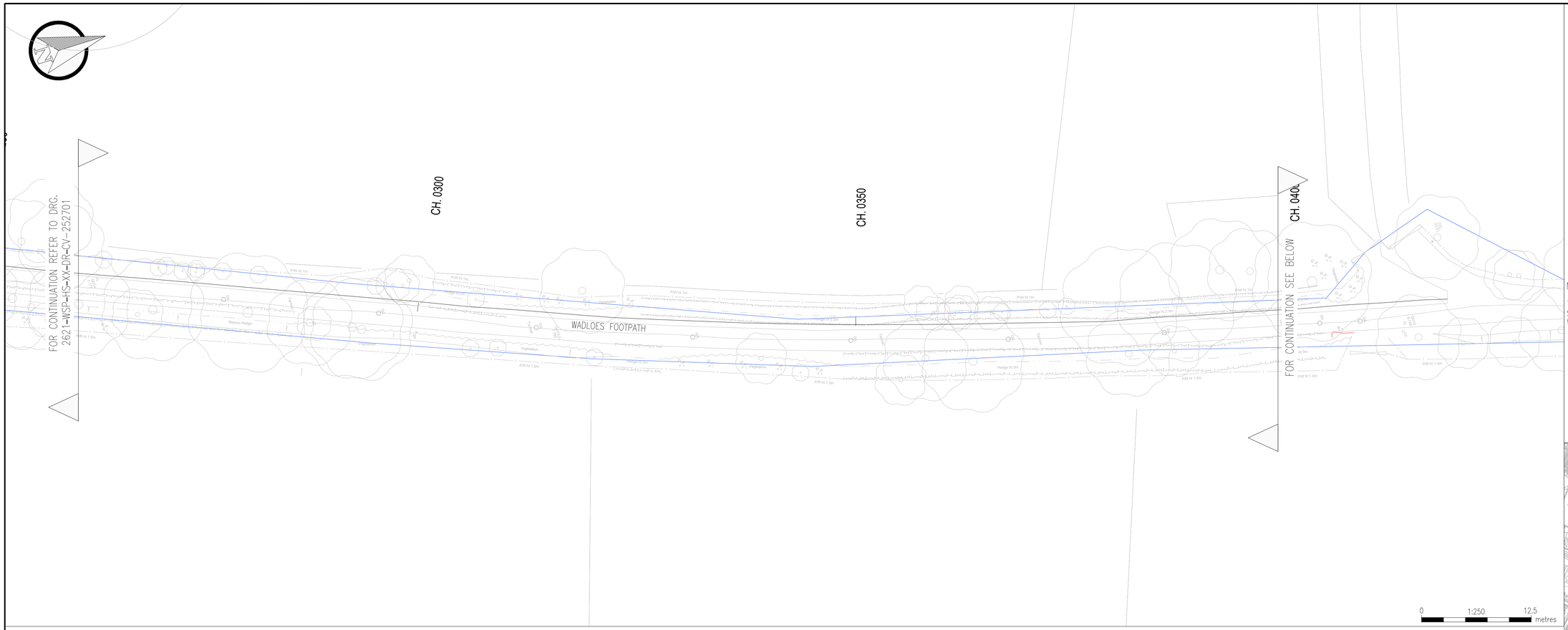
FUSION PLAN

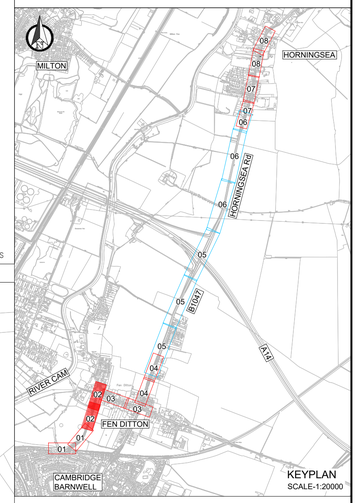
DRAWN BY:	CHECKED BY:	REQUESTED BY:
J.Reape	C.Cockerham	A.Malecki

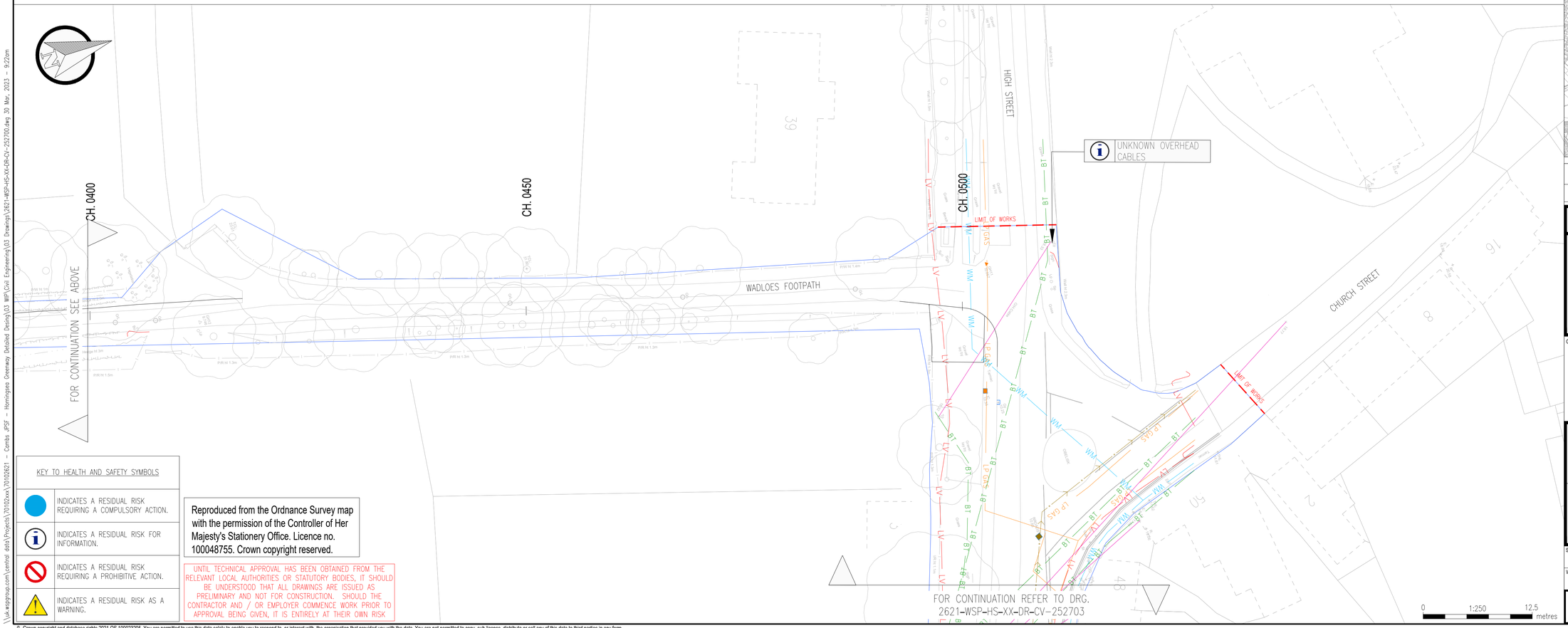
DATE:	SCALE:
03/08/2022	1:1000 @ A0

DRAWING NUMBER:	REVISION:
CEN22168	A

SHEET 04 of 04







KEY

- WORK EXTENTS
- BT — BT
- VM — VIRGIN MEDIA
- LP GAS — GAS – LOW PRESSURE
- WM — WATER MAIN
- FW SEWER
- FW RISING MAIN
- SURFACE WATER GRAVITY FLOW
- T — T — TELECOMS – NEOS
- LV — ELECTRICITY – LOW VOLTAGE
- HV — ELECTRICITY – HIGH VOLTAGE
- UNKNOWN OVERHEAD CABLES
- PROPOSED KERB

NOTES

THIS DRAWING IS BASED ON INFORMATION PROVIDED BY "CENTARA BUREAU SERVICES" ON AUGUST 2022. DRAWING REFERENCE CEN22168 FUSION PLAN. WSP DOES NOT WARRANT FOR THE ACCURACY OF THESE INFORMATION.

KEY TO HEALTH AND SAFETY SYMBOLS

	INDICATES A RESIDUAL RISK REQUIRING A COMPULSORY ACTION.
	INDICATES A RESIDUAL RISK FOR INFORMATION.
	INDICATES A RESIDUAL RISK REQUIRING A PROHIBITIVE ACTION.
	INDICATES A RESIDUAL RISK AS A WARNING.

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REV	DATE	BY	DESCRIPTION	CHK	APD
P01	31/03/2023	CB	FIRST ISSUE		

DRAWING STATUS: S2 - FOR INFORMATION

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www.wsp.com

CLIENT: GREATER CAMBRIDGE PARTNERSHIP

PROJECT: HORNINGSEA GREENWAY

TITLE: C2 COMPOSITE UTILITY PLANS SHEET 02 OF 08

SCALE @ A1	DATE	DESIGN/DRAWN	CHECKED	APPROVED	SHEET
1:250	07/03/2023	CB	BKD	ACC	A1

WSP PROJECT NO.: 70102621

DRAWING No.: 2621-WSP-HS-XX-DR-CV-252702 REV: P01

\\uk.wspgroup.com\central data\Projects\70102xxx\70102621 - Cambs. IPSF - Horningsea Greenway Detailed Design\03 WIP\Civil Engineering\03 Drawings\3621-WSP-HS-XX-DR-CV-252700.dwg, 30 May, 2023 - 9:22am

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CH. 0550

CH. 0600

CH. 0650

CH. 0700

CH. 0750

CH. 0800

FOR CONTINUATION REFER TO DRG. 2621-WSP-HS-XX-DR-CV-252702

FOR CONTINUATION SEE BELOW

FOR CONTINUATION SEE ABOVE

FOR CONTINUATION REFER TO DRG. 2621-WSP-HS-XX-DR-CV-252704

HIGH STREET

HIGH DITCH ROAD

KEEP CLEAR

B1047

UNKNOWN OVERHEAD CABLES

HWT OC WORKS

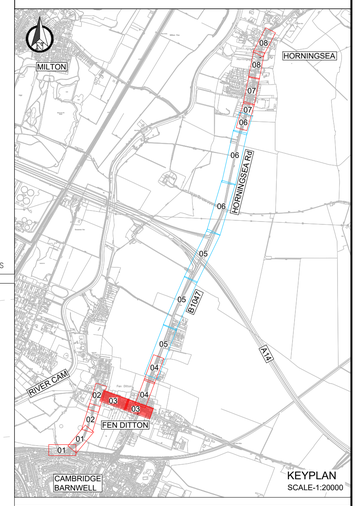
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KEY

- WORK EXTENTS
- BT — BT
- VM — VIRGIN MEDIA
- LP GAS — GAS – LOW PRESSURE
- WM — WATER MAIN
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- FW RISING MAIN
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- UNKNOWN OVERHEAD CABLES
- PROPOSED KERB

NOTES

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KEYPLAN
SCALE-1:20000

KEY TO HEALTH AND SAFETY SYMBOLS

●	INDICATES A RESIDUAL RISK REQUIRING A COMPULSORY ACTION.
ⓘ	INDICATES A RESIDUAL RISK FOR INFORMATION.
⊘	INDICATES A RESIDUAL RISK REQUIRING A PROHIBITIVE ACTION.
⚠	INDICATES A RESIDUAL RISK AS A WARNING.

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REV	DATE	BY	DESCRIPTION	CHK	APD
P01	31/03/2023	CB	FIRST ISSUE		

DRAWING STATUS: S2 - FOR INFORMATION

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www.wsp.com

CLIENT: GREATER CAMBRIDGE PARTNERSHIP

PROJECT: HORNINGSEA GREENWAY

TITLE: C2 COMPOSITE UTILITY PLANS
SHEET 03 OF 08

SCALE @ A1	DATE	DESIGN/DRAWN	CHECKED	APPROVED	SHEET
1:250	07/03/2023	CB	BKD	ACC	A1

WSP PROJECT NO.: 70102621

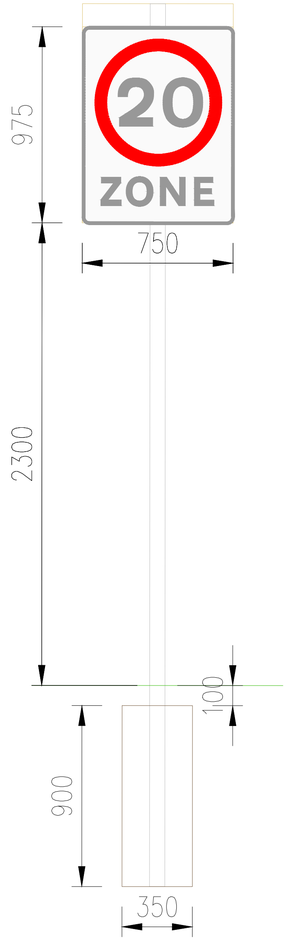
DRAWING No.: 2621-WSP-HS-XX-DR-CV-252703 REV.: P01

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\\uk.wspgroup.com\central data\Projects\70102xxx\70102621 - Cambs JPSF - Horningsea Greenway Detailed Design\03 WIP\Civil Engineering\05 Drawings\2621-WSP-HS-XX-DR-CV-252700.dwg 30 Mar, 2023 - 9:27am

Signing Project	Horningsea Greenway				
Sign Reference	674	Width (mm)	750	Background	White
x Height	50.0	Height (mm)	975	Border	Black
Material	Class RA2	Area (sq.m)	0.73	Legend	Black

Signing Project	Horningsea Greenway				
Sign Reference	675	Width (mm)	750	Background	White
x Height	50.0	Height (mm)	1090	Border	Black
Material	Class RA2	Area (sq.m)	0.82	Legend	Black



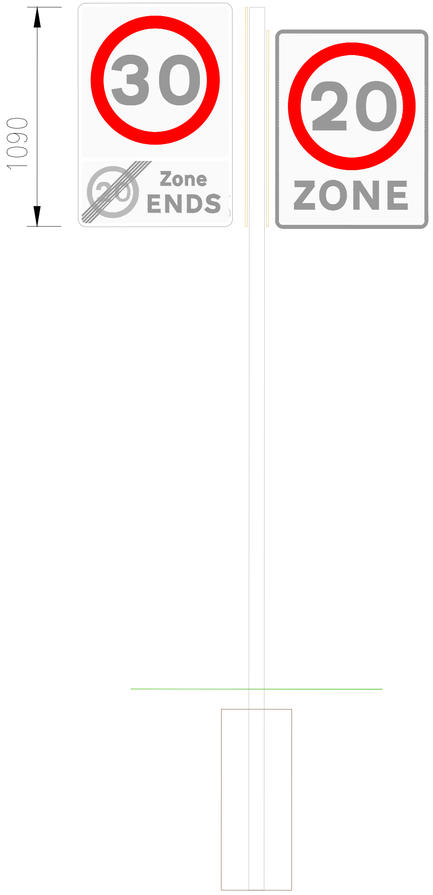
Structural Calculation Details

Signs:
- Reference: FD07, FD22
- Width: 750mm, Height: 975mm
- Shape: Rectangle
- Orientation: Facing front
- Mounted on posts: 1
- Mounting height: 2300mm, at post

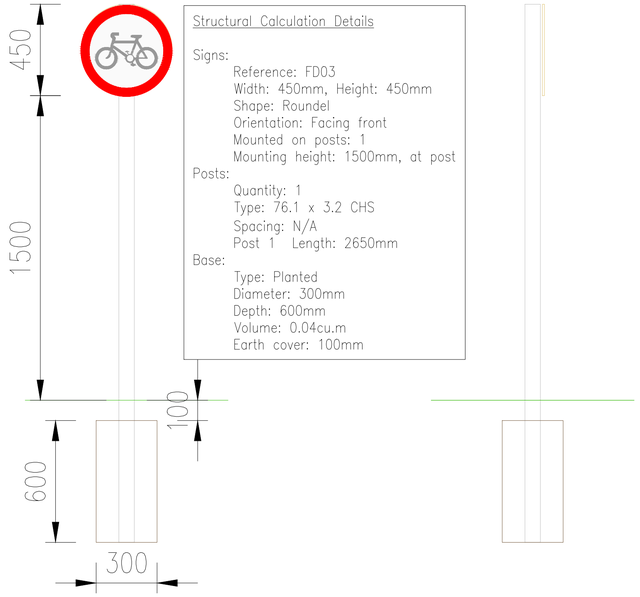
- Reference: FD06, FD21
- Width: 750mm, Height: 1090mm
- Shape: Rectangle
- Orientation: Facing back
- Mounted on posts: 1
- Mounting height: 2300mm, at post

Posts:
- Quantity: 1
- Type: 76.1 x 3.2 CHS (S355)
- Spacing: N/A
- Post 1 Length: 4390mm

Base:
- Type: Planted
- Diameter: 350mm
- Depth: 900mm
- Volume: 0.09cu.m
- Earth cover: 100mm



Signing Project	GREENWAYS				
Sign Reference	FD03	Width (mm)	450	Background	White
x Height		Height (mm)	450	Border	Red
Material	Class RA2	Area (sq.m)	0.16	Legend	Black

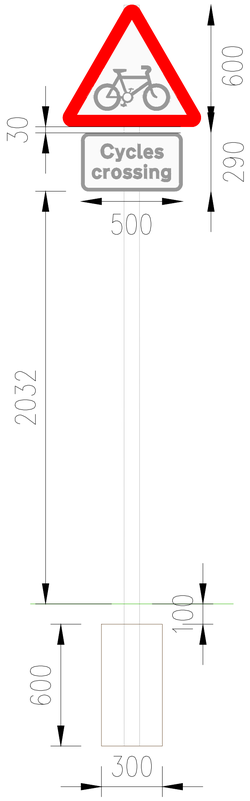


Structural Calculation Details

Signs:
- Reference: FD03
- Width: 450mm, Height: 450mm
- Shape: Roundel
- Orientation: Facing front
- Mounted on posts: 1
- Mounting height: 1500mm, at post

Posts:
- Quantity: 1
- Type: 76.1 x 3.2 CHS
- Spacing: N/A
- Post 1 Length: 2650mm

Base:
- Type: Planted
- Diameter: 300mm
- Depth: 600mm
- Volume: 0.04cu.m
- Earth cover: 100mm



Signing Project	GREENWAYS				
Sign Reference	FD04	Width (mm)	680	Background	White
x Height		Height (mm)	600	Border	Red
Material	Class RA2	Area (sq.m)	0.24	Legend	Black

Signing Project	GREENWAYS				
Sign Reference		Width (mm)	500	Background	White
x Height	50.0	Height (mm)	290	Border	Black
Material	Class RA2	Area (sq.m)	0.14	Legend	Black

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REV	DATE	BY	DESCRIPTION	CHK	APD
P01	20/12/2023	CB	ISSUED FOR CONSTRUCTION APPROVAL	ACC	

DRAWING STATUS
S4 - FOR APPROVAL

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CLIENT
GREATER CAMBRIDGE PARTNERSHIP

PROJECT
HORNINGSEA GREENWAY DETAILED DESIGN

TITLE
PROPOSED TRAFFIC SIGN DETAILS - PHASE 2
SHEET 02 OF 02

SCALE @ A1	DATE	DESIGN/DRAWN	CHECKED	APPROVED	SHEET
1:250	29/03/2023	AS	AKM	ACC	A1

WSP PROJECT NO.
70113562

DRAWING No.
3562-WSP-HS-XX-DR-CV-251210

REV.
P01

C:\Users\UKC0B0D5\WSP 0365\70113562 - Horningsea Greenway detailed Design - Documents\03 WIP\Civil Engineering\03 Drawings\3562-WSP-HS-XX-DR-CV-251200.dwg 14 Dec, 2023 - 4:59pm

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PROPOSED SIGNS TO DIAG 676 REF FD07

PROPOSED SIGNS TO DIAG 675 REF FD06

LIMIT OF

PROPOSED SIGNS TO DIAG. 950 WITH SUB-PLATE "CYCLE CROSSING" REF FD04

PROPOSED SIGNS GREENWAY WAY-FINDING REF FD05

LIMIT OF WORKS

CH. 0500

EXISTING ROAD NAME SIGN TO BE RETAINED

PROPOSED SIGN TO DIAG 951 REF FD03

PROPOSED SIGN TO DIAG 619 WITH SUB-PLATE REF FD01 & FD02

CH. 0550

CH. 0600

CH. 0650

HIGH STREET

PROPOSED REPEATER SIGNS TO DIAG 670 (300) TO BE MOUNTED BACK TO BACK ON EXISTING LAMP COLUMN. EXACT LOCATION TO BE CONFIRMED ON SITE WITH CCC ENGINEER. REF FD08 & FD09

PROPOSED REPEATER SIGNS TO DIAG 670 (300) TO BE MOUNTED BACK TO BACK ON EXISTING LAMP COLUMN. EXACT LOCATION TO BE CONFIRMED ON SITE WITH CCC ENGINEER. REF FD10 & FD11

FOR CONTINUATION SEE BELOW

FOR CONTINUATION REFER TO DRG. 3562-WSP-HS-XX-DR-CV-251202

PROPOSED SIGN DIRECTION & DISTANCE SIGN REF FD20

PROPOSED SIGN GREENWAY WAY-FINDING REF FD19

B1047

EXISTING SIGNS TO DIAG 956 AND DIRECTION & DISTANCE SIGN. REF ES06 PROPOSED SIGN SOUTHBOUND TO DIAG 956 REF FD23

PROPOSED SIGNS TO DIAG 602 & 675 TO BE MOUNTED BACK TO BACK WITH SIGN TO DIAG 674. REF FD16, FD17 & FD18

EXISTING ROAD NAME SIGN TO BE RETAINED

PROPOSED SIGNS 2NO. GREENWAY WAY-FINDING TO BE MOUNTED BACK TO BACK REF FD14 & FD15

PROPOSED REPEATER SIGNS TO DIAG 670 (300) TO BE MOUNTED BACK TO BACK ON EXISTING LAMP COLUMN. EXACT LOCATION TO BE CONFIRMED ON SITE WITH CCC ENGINEER. REF FD12 & FD13

CH. 0700

CH. 0750

CH. 0800

HIGH STREET

FOR CONTINUATION SEE ABOVE

KEEP CLEAR

HIGH DITCH ROAD

LIMIT OF WORKS

EXISTING SIGNS TO DIAG 816 TO BE RETAINED

PROPOSED SIGNS TO DIAG 675 REF FD21

PROPOSED SIGNS TO DIAG 676 REF FD22

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KEYPLAN SCALE-1:20000

HORNINGSEA, MILTON, FEN DITTON, RIVER CAM, CAMBRIDGE, BARNWELL, A14, B1047, HORNINGSEA RD

KEY

- PROPOSED SIGN
- EXISTING SIGN TO BE TAKEN DOWN AND REMOVED FOUNDATION TO BE BROKEN OUT AND LEVELLED TO FORMATION LEVEL
- EXISTING SIGN TO BE RETAINED AND PROTECTED FOR THE DURATION OF THE WORKS
- EXISTING SIGN PLATE TO BE RELOCATED
- PROPOSED BOLLARD
- PROPOSED KERBLINE

DIA REF	WIDTH (m)	COLOUR	LENGTH (m)	GAP (m)
1003A	0.200	WHITE	6.000	3
1004	0.100	WHITE	4.000	2
1009A	0.100	WHITE	0.600	0.300
1023A	1.250	WHITE	3.750	N/A
1057	0.750	WHITE	1.215	N/A
1018	0.075	YELLOW	N/A	N/A
1065	N/A	WHITE	4.300	N/A
1024	1.6	WHITE	N/A	N/A
1003	0.2	WHITE	N/A	1
1012.1	0.15	WHITE	N/A	N/A
1049	0.15	WHITE	N/A	N/A
1059	N/A	WHITE	1.000	N/A

NOTES

1. ALL DIMENSIONS ARE IN METRES UNLESS STATED OTHERWISE
2. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL RELATED DOCUMENTATION AND STANDARD DETAILS.
3. CONFLICTING INFORMATION SHOWN ON THE ENGINEER'S DRAWINGS OR DISCREPANCIES BETWEEN THE INFORMATION GIVEN BY THE DESIGNER AND THAT PROVIDED BY OTHERS MUST BE REFERRED TO THE DESIGNER BEFORE THE WORKS COMMENCE.
4. ALL TRAFFIC SIGNS AND ROAD MARKINGS TO BE IN ACCORDANCE WITH THE TRAFFIC SIGNS REGULATIONS AND GENERAL DIRECTIONS (TSRGD) 2016 AND CHAPTERS 1,3,4 & 5 OF THE TRAFFIC SIGNS MANUAL(TSM).
5. ALL ROAD MARKINGS TO BE THERMOPLASTIC MATERIAL IN ACCORDANCE WITH BS EN 1871 AND HAVE CLASS S3 SKID RESISTANCE IN ACCORDANCE WITH BS EN 1436. ALL WHITE ROAD MARKINGS TO HAVE REFLECTORISED GLASS BEADS IN ACCORDANCE WITH BS EN 1423 & BS EN 1424.
6. ROAD MARKINGS TO BE APPLIED USING THERMOPLASTIC PAINT AND SHALL ACHIEVE A MINIMUM 55 PSV UNLESS OTHERWISE STATED / AGREED IN WRITING WITH THE ADOPTING AUTHORITY.
7. WHEREVER PRACTICABLE SIGNS SHALL BE ERECTED/MOUNTED ON OTHER STREET FURNITURE (EG: LAMP COLUMNS) IN ORDER TO MINIMISE CLUTTER, AS INDICATED ON THE LAYOUT AND SIGNAGE SCHEDULE.
8. PRIOR TO EXCAVATION AND POURING OF ASSOCIATED FOUNDATIONS, THE CONTRACTOR SHALL AGREE THE FINAL LOCATIONS OF ALL SIGNS AND STREET FURNITURE WITH THE ADOPTING AUTHORITY.

REV	DATE	BY	DESCRIPTION	CHK	APD
P01	20/12/2023	CB	ISSUED FOR CONSTRUCTION APPROVAL	ACC	

DRAWING STATUS

S2 - FOR INFORMATION

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www.wsp.com

CLIENT

GREATER CAMBRIDGE PARTNERSHIP

PROJECT

HORNINGSEA GREENWAY DETAILED DESIGN

TITLE

PROPOSED TRAFFIC SIGNS & ROAD MARKINGS
SHEET 01 OF 04

SCALE @ A1	DATE	DESIGN/DRAWN	CHECKED	APPROVED	SHEET
1:250	29/03/2023	AS	AKM	ACC	A1

WSP PROJECT NO.

70113562

DRAWING No.

3562-WSP-HS-XX-DR-CV-251201

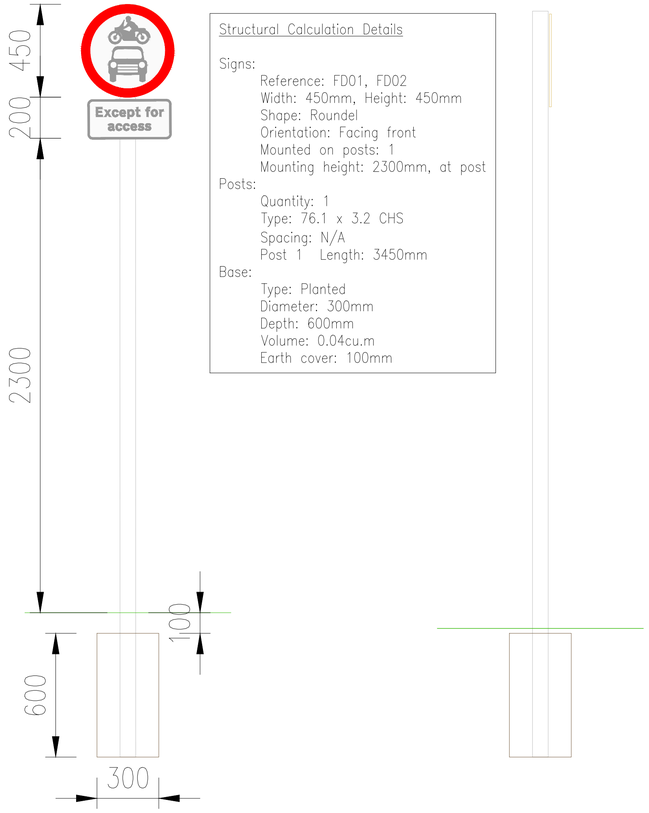
REV.

P01

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Signing Project	GREENWAYS				
Sign Reference	FD01	Width (mm)	450	Background	White
x Height		Height (mm)	450	Border	Red
Material	Class RA2	Area (sq.m)	0.16	Legend	Black



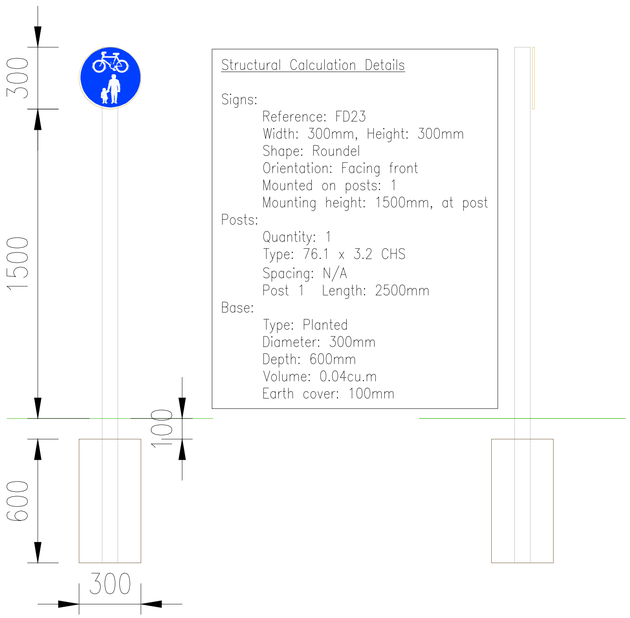
Structural Calculation Details

Signs:
- Reference: FD01, FD02
- Width: 450mm, Height: 450mm
- Shape: Roundel
- Orientation: Facing front
- Mounted on posts: 1
- Mounting height: 2300mm, at post

Posts:
- Quantity: 1
- Type: 76.1 x 3.2 CHS
- Spacing: N/A
- Post 1 Length: 3450mm

Base:
- Type: Planted
- Diameter: 300mm
- Depth: 600mm
- Volume: 0.04cu.m
- Earth cover: 100mm

Signing Project	GREENWAYS				
Sign Reference	FD23	Width (mm)	300	Background	Blue
x Height		Height (mm)	300	Border	White
Material	Class RA2	Area (sq.m)	0.07	Legend	White



Structural Calculation Details

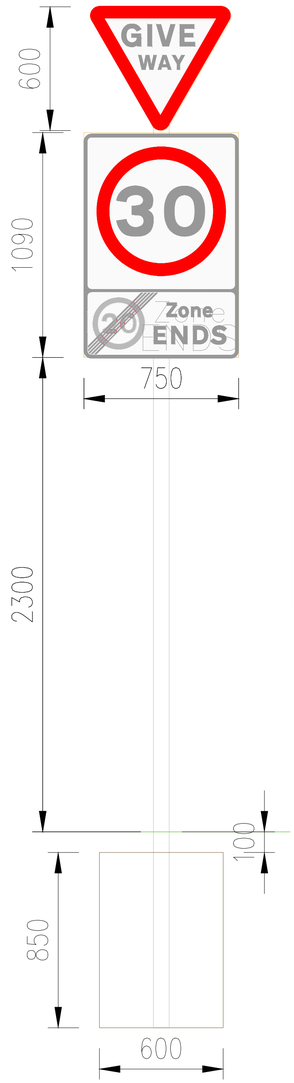
Signs:
- Reference: FD23
- Width: 300mm, Height: 300mm
- Shape: Roundel
- Orientation: Facing front
- Mounted on posts: 1
- Mounting height: 1500mm, at post

Posts:
- Quantity: 1
- Type: 76.1 x 3.2 CHS
- Spacing: N/A
- Post 1 Length: 2500mm

Base:
- Type: Planted
- Diameter: 300mm
- Depth: 600mm
- Volume: 0.04cu.m
- Earth cover: 100mm

Signing Project	GREENWAYS				
Sign Reference	FD16	Width (mm)	680	Background	White
x Height		Height (mm)	600	Border	Red
Material	Class RA2	Area (sq.m)	0.24	Legend	Black

Signing Project	GREENWAYS				
Sign Reference	FD17	Width (mm)	750	Background	White
x Height	50.0	Height (mm)	1090	Border	Black
Material	Class RA2	Area (sq.m)	0.82	Legend	Black



Structural Calculation Details

Signs:
- Reference: FD16
- Width: 680mm, Height: 600mm
- Shape: Inverted Triangle
- Orientation: Facing front
- Mounted on posts: 1
- Mounting height: 3400mm, at post

- Reference: FD17
- Width: 750mm, Height: 1090mm
- Shape: Rectangle
- Orientation: Facing front
- Mounted on posts: 1
- Mounting height: 2300mm, at post

- Reference: FD18
- Width: 750mm, Height: 975mm
- Shape: Rectangle
- Orientation: Facing back
- Mounted on posts: 1
- Mounting height: 2300mm, at post

Posts:
- Quantity: 1
- Type: 76.1 x 3.2 CHS
- Spacing: N/A
- Post 1 Length: 4950mm

Base:
- Type: Planted
- Diameter: 600mm
- Depth: 850mm
- Volume: 0.24cu.m
- Earth cover: 100mm

Signing Project	GREENWAYS				
Sign Reference	FD18	Width (mm)	750	Background	White
x Height	50.0	Height (mm)	975	Border	Black
Material	Class RA2	Area (sq.m)	0.73	Legend	Black



Signing Project	Horningsea Greenway				
Sign Reference	670	Width (mm)	300	Background	White
x Height		Height (mm)	300	Border	Red
Material	Class RA2	Area (sq.m)	0.07	Legend	Black



Structural Calculation Details

Signs:
- Reference: FD08, FD09, FD10, FD11, FD12, FD13
- Width: 300mm, Height: 300mm
- Shape: Roundel
- Mounted back to back on Existing Lamp Columns

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P01	20/12/2023	CB	ISSUED FOR CONSTRUCTION APPROVAL		ACC

DRAWING STATUS
S4 - FOR APPROVAL

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CLIENT
GREATER CAMBRIDGE PARTNERSHIP

PROJECT
HORNINGSEA GREENWAY DETAILED DESIGN

TITLE
PROPOSED TRAFFIC SIGN DETAILS - PHASE 2
SHEET 01 OF 02

SCALE @ A1	DATE	DESIGN/DRAWN	CHECKED	APPROVED	SHEET
1:250	29/03/2023	AS	AKM	ACC	A1

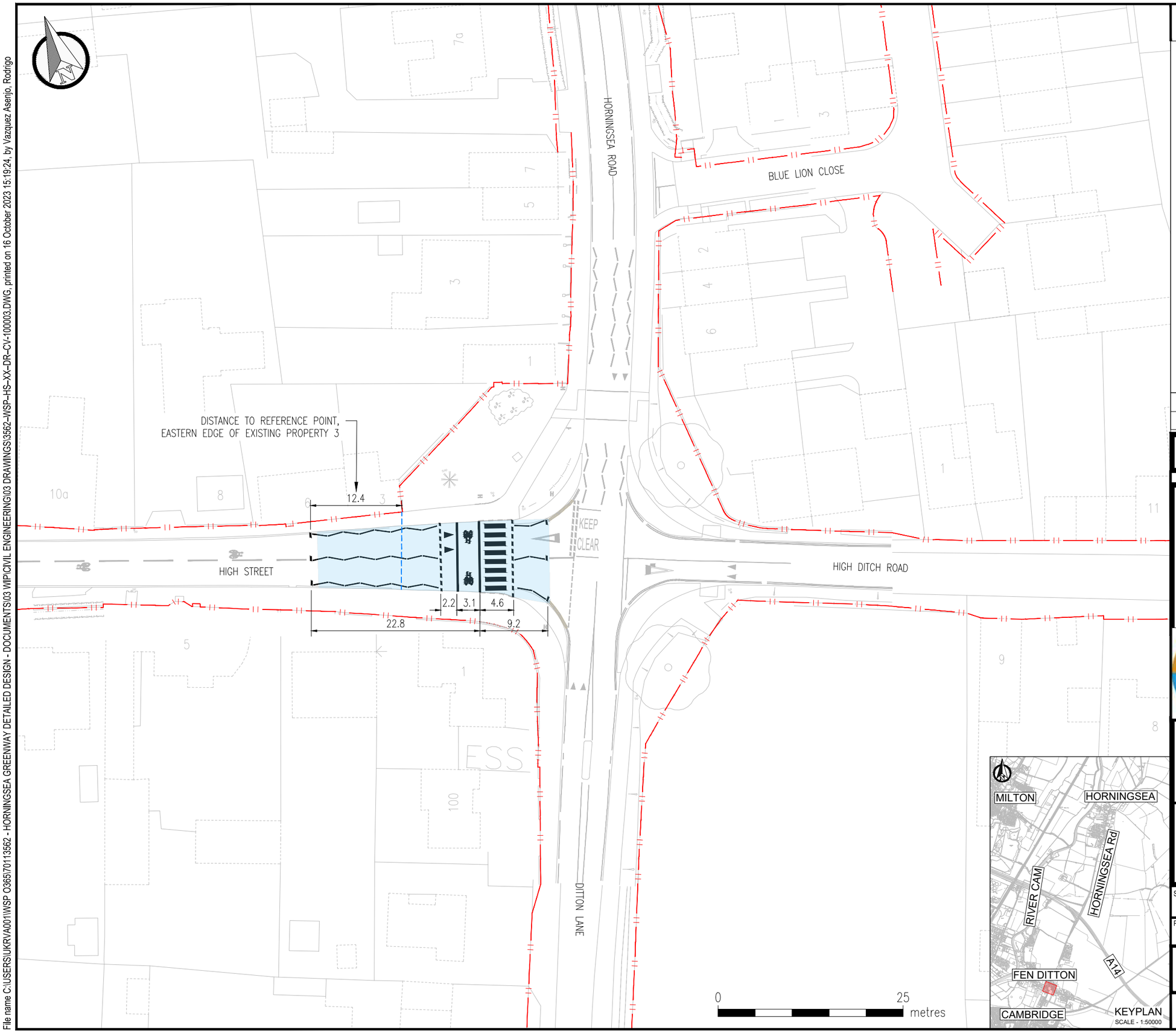
WSP PROJECT NO.
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DRAWING No.
3562-WSP-HS-XX-DR-CV-251209

REV.
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DO NOT SCALE

KEY

- PROPOSED PARALLEL CROSSING LOCATION
- HIGHWAY BOUNDARY
- REFERENCE POINT LINE
- PROPOSED PARALLEL CROSSING ROAD MARKINGS

NOTES

1. ALL DIMENSIONS IN METRES UNLESS OTHERWISE STATED

UNTIL TECHNICAL APPROVAL HAS BEEN OBTAINED FROM THE RELEVANT LOCAL AUTHORITIES OR STATUTORY BODIES, IT SHOULD BE UNDERSTOOD THAT ALL DRAWINGS ARE ISSUED AS PRELIMINARY AND NOT FOR CONSTRUCTION. SHOULD THE CONTRACTOR AND / OR EMPLOYER COMMENCE WORK PRIOR TO APPROVAL BEING GIVEN, IT IS ENTIRELY AT THEIR OWN RISK

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P01	13/09/2023	CB	FIRST ISSUE		

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GREATER CAMBRIDGE PARTNERSHIP

PROJECT: HORNINGSEA GREENWAY DETAILED DESIGN

TITLE: TRAFFIC REGULATION ORDER PROPOSED PARALLEL CROSSING FEN DITTON

SCALE @ A3:	CHECKED:		APPROVED:
1:500	RVA		ACC
PROJECT No:	DESIGNED:	DRAWN:	DATE:
70113562	CB	CB	October 23

DRAWING No: 3562-WSP-HS-XX-DR-CV-100003 REV: P01

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HORNINGSEA GREENWAY - PEDAL CYCLE PRIORITY MEASURES:

HIGH STREET, FEN DITTON;
HIGH STREET, HORNINGSEA

The Cambridgeshire County Council (HIGH STREET, FEN DITTON; HIGH STREET, HORNINGSEA) (20 mph, Speed Limits) Order 202-

Cambridgeshire County Council proposes to make the above-named Order under powers contained in the Road Traffic Regulation Act 1984. The effect of the Order would be to:

introduce a 20mph Speed Limit in the following lengths of road:

High Street, Fen Ditton - from the centre of its junction with Horningsea Road (B1047) for a distance of 280m in western direction;

Church Street, Fen Ditton - from a point 257m west of the centre of the junction with Horningsea Road(B1047) and High Street for a distance of 30m in north-westerly direction

Church Street, Fen Ditton - from a point 278m west of the centre of the junction with Horningsea Road(B1047) and High Street for a distance of 12m in north-easterly direction

High Street, Horningsea - from a point of 8m north of the north-western kerbline of High Street with its junction with Dock Lane for a distance of 640 in southern direction;

Notice of Intention to Install Pedestrian and Cycle Crossing

Cambridgeshire County Council hereby gives notice of its intention to install a ‘zebra’ pedestrian crossing with a parallel pedal cycle crossing facility under powers contained in the Road Traffic Regulation Act 1984, centred upon the following location:-

High Street, Fen Ditton – at a point 4.5m west of its junction with Horningsea Road (B1047), Fen Ditton for a distance of 23m in western direction. ‘Zig-zag’ markings (on which vehicles would be prohibited from stopping at all times), would be laid on both sides of the carriageway for a distance of 18m on western side and 4m on eastern side of this crossing.

These proposals are intended to provide a level surface for pedestrian or pedestrian and cycle crossings and crossing points and reduce the speed of motor vehicles in the vicinity of pedal cycle priority measures in High Street, Fen Ditton and in High Street, Horningsea .

For further details of the above proposals please visit our permanent traffic regulation orders page and select -------. Detailed drawings can be viewed at {web address}. To request copies of documents please telephone 0345 045 5212 or use the e-mail address below.

Objections to the above proposals, stating the grounds on which they are made, or any other comments must be sent in writing to the undersigned or by email to

policyandregulation@cambridgeshire.gov.uk by --- -------- 202- quoting reference ---------. Comments received will be used as part of our consultation process and may be published, but will be anonymised, in any reports.

Frank Jordan, Executive Director, Place and Sustainability, c/o Policy and Regulation, Box No.D8E, Huntingdon Highways Depot, Stanton Way, Huntingdon PE29 6PY

-- ---------- 202-

Cambridgeshire County Council

THE CAMBRIDGESHIRE COUNTY COUNCIL
(HIGH STREET, FEN DITTON; HIGH STREET, HORNINGSEA)
(20 mph, Speed Limits) Order 202-

The Cambridgeshire County Council in exercise of its powers under sections 84(1) and (2) and 124 of and Part IV of Schedule 9 to the Road Traffic Regulation Act 1984[1] as amended ('the 1984 Act') and of all other enabling powers, and after consultation with the Chief Officer of Police in accordance with Part III of Schedule 9 to the 1984 Act, hereby makes the following Order:

1. This Order may be cited as 'The Cambridgeshire County Council (HIGH STREET, FEN DITTON; HIGH STREET, HORNINGSEA) (20 mph, Speed Limits) Order 202- ' and shall come into operation on the -- day of ------ 202-.
2. No person shall drive any motor vehicle at a speed exceeding 20 miles per hour in any road or length of road specified in Schedule 1 to this Order.
3. No speed limit imposed by this Order applies to vehicles falling within Regulation 3(4) of the Road Traffic Exemption (Special Forces) (Variation Amendment) Regulations 2011[2] when used in accordance with Regulation 3(5) of those Regulations.

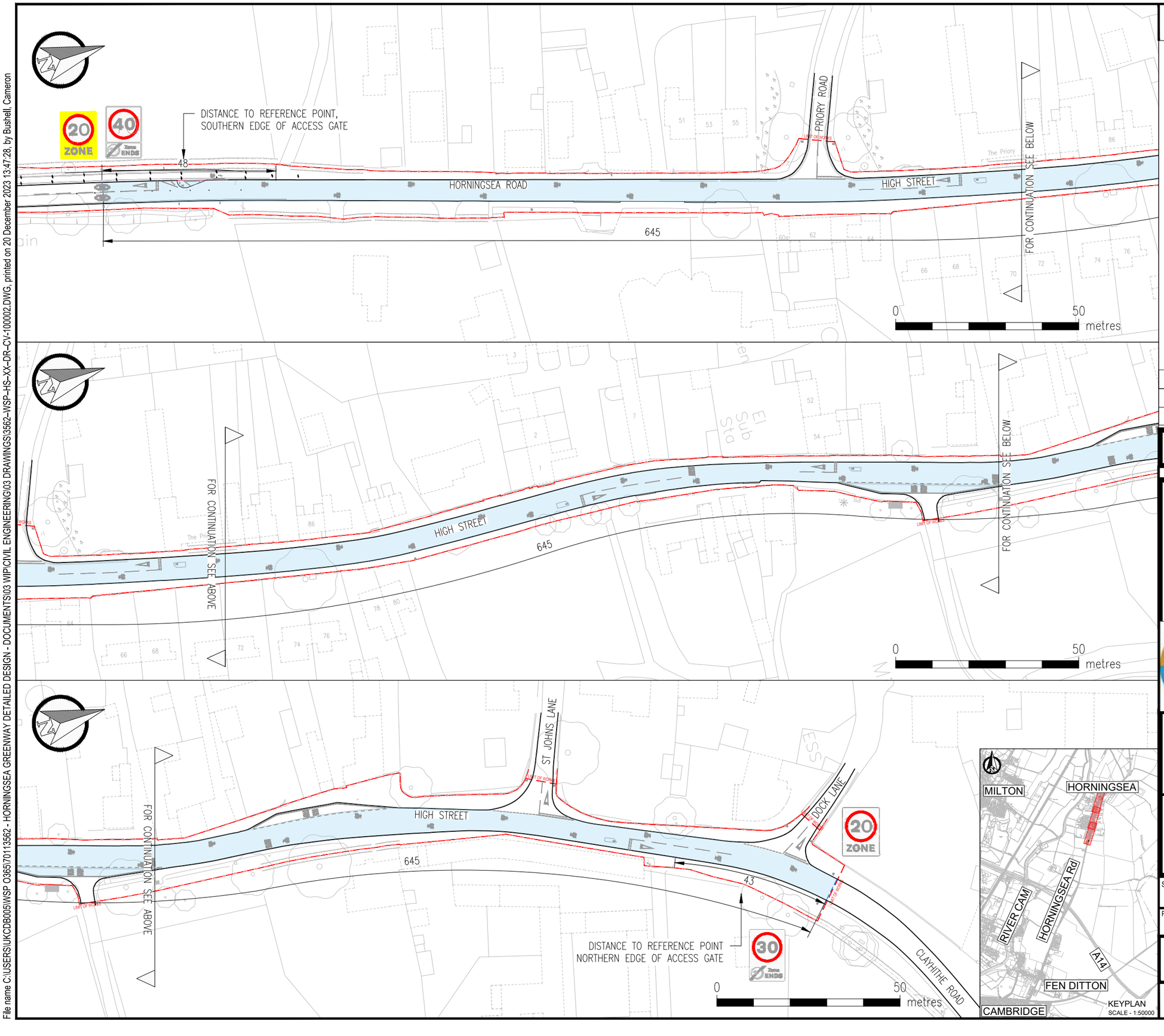
THE COMMON SEAL of CAMBRIDGESHIRE)
COUNTY COUNCIL was hereunto affixed)
this -- day of ------ 202-)
in the presence of)
Authorised officer

SCHEDULE 1 – 20 MPH SPEED LIMITS

Roads and Lengths of Roads in the northeast edge of Cambridge Parish of Fen Ditton

High Street, Fen Ditton	-	from the centre of its junction with Horningsea Road (B1047) for a distance of 280m in western direction;
Church Street, Fen Ditton	-	from a point 257m west of the centre of the junction with Horningsea Road(B1047) and High Street for a distance of 30m in north-westerly direction
Church Street, Fen Ditton	-	from a point 278m west of the centre of the junction with Horningsea Road(B1047) and High Street for a distance of 12m in north-easterly direction
High Street, Horningsea	-	from a point of 8m north of the north-western kerbline of High Street with its junction with Dock Lane for a distance of 640 in southern direction;

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DO NOT SCALE

KEY

- EXTENTS OF PROPOSED 20 MPH ZONE
- HIGHWAY BOUNDARY
- LOCATION OF SPEED LIMIT SIGNS

NOTES

1. ALL DIMENSIONS IN METRES UNLESS OTHERWISE STATED

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P02	20/12/2023	CB	ISSUED FOR CONSTRUCTION APPROVAL	MS	ACC
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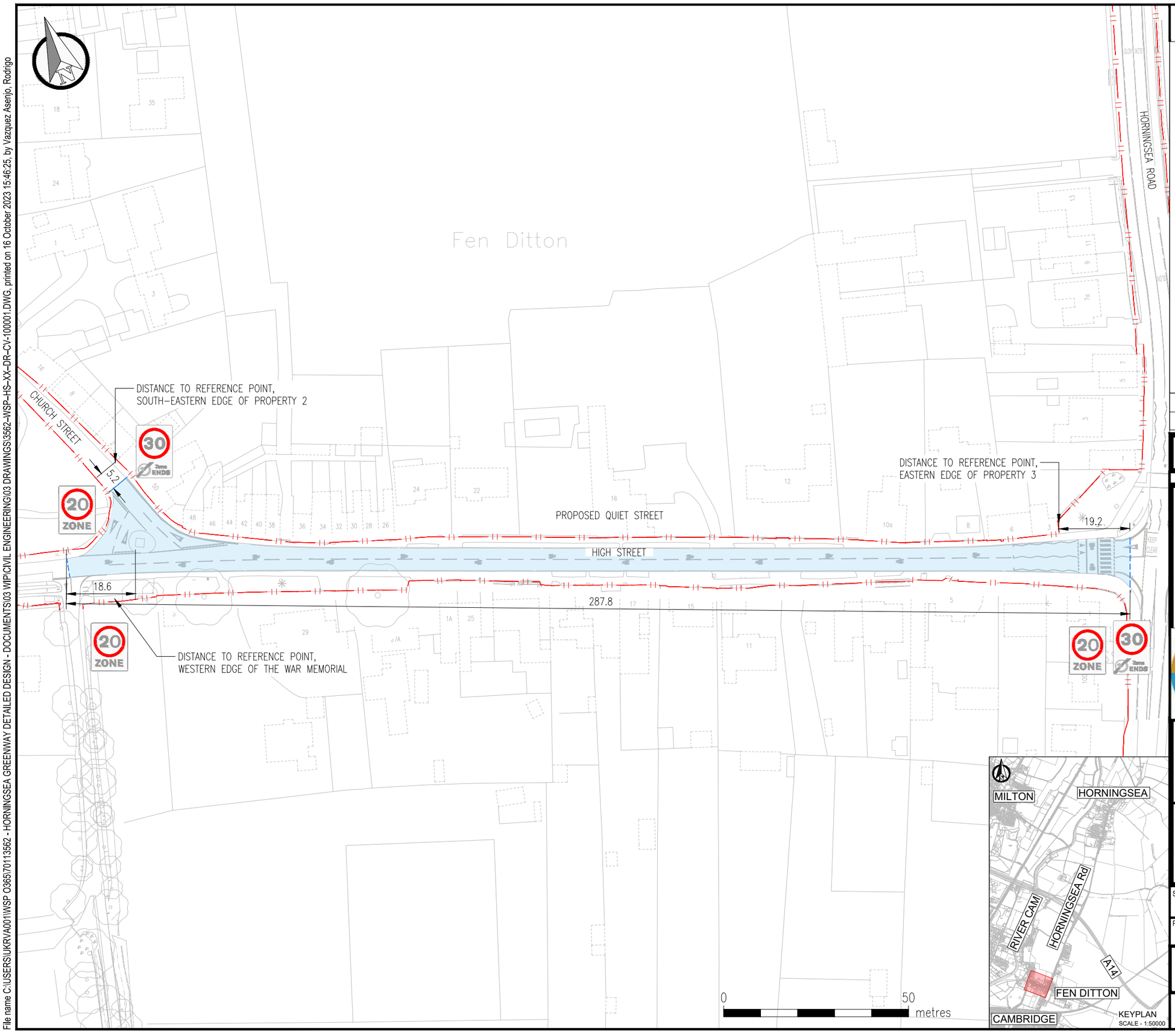
PROJECT: HORNINGSEA GREENWAY DETAILED DESIGN

TITLE: TRAFFIC REGULATION ORDER PROPOSED 20MPH ZONE HORNINGSEA ROAD - HIGH STREET

SCALE @ A3:	CHECKED:		APPROVED:
1:1000	RVA		ACC
PROJECT No:	DESIGNED:	DRAWN:	DATE:
70113562	CB	CB	October 23

DRAWING No: 3562-WSP-HS-XX-DR-CV-100002 REV: P02

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KEY

- EXTENTS OF PROPOSED 20 MPH ZONE
- HIGHWAY BOUNDARY
- LOCATION OF SPEED LIMIT SIGNS

NOTES

1. ALL DIMENSIONS IN METRES UNLESS OTHERWISE STATED

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GREATER CAMBRIDGE PARTNERSHIP

PROJECT: HORNINGSEA GREENWAY DETAILED DESIGN

TITLE: TRAFFIC REGULATION ORDER PROPOSED 20MPH ZONE FEN DITTON HIGH STREET

SCALE @ A3:	CHECKED:		APPROVED:
1:1000	RVA		ACC
PROJECT No:	DESIGNED:	DRAWN:	DATE:
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DRAWING No: 3562-WSP-HS-XX-DR-CV-100001 REV: P01

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STATEMENT OF REASONS

ROAD TRAFFIC REGULATION ACT 1984

The Local Authorities' Traffic Orders (Procedure) (England and Wales) Regulations 1996

Name of Order:-

The Cambridgeshire County Council (HIGH STREET, FEN DITTON; HIGH STREET, HORNINGSEA) (20 mph, Speed Limits) Order 202-

The Authority's reasons for proposing to make the above-named Orders are as follows:-

- For avoiding danger to persons or other traffic using the road or any other road or for preventing the likelihood of any such danger arising.
- For facilitating the passage on the road or any other road of pedal cycle traffic.
- For promoting lower vehicle speeds and creating a safer environment for all road users, especially pedal cycle users.
- For promoting lower vehicle speeds, improving road safety with the aim of reducing the number and severity of road traffic collisions.

Explanatory Note:-

For the reasons above the proposed Orders will assist as part of the Greater Cambridgeshire Partnership (GCP) Greenways Network, to enable safer pedestrian, pedal cycle, and where appropriate, equestrian facilities.

The proposals will help to create a safer environment which could be considered more conducive to safer active travel for more vulnerable road users (including pedestrians and cyclists), improve local air quality, improve local and rural connectivity and help to create a comprehensive network of radial routes from the centre of Cambridge, providing surrounding communities with access to the centre.

Appendix B

DfT Tables

Confidential

Economic Efficiency of the Transport System (TEE) - Comberton Greenway

Non-business: Commuting	MODES		ROAD	COACH	RAIL	OTHER
User benefits	TOTAL		Private Cars and LGVs	Passengers	Passengers	
Travel time	6,386		6,386			0
Vehicle operating costs	0					
User charges	0					
During Construction & Maintenance	0					
NET NON-BUSINESS BENEFITS: COMMUTING	6,386	*(1a)*	6,386	0	0	0

Non-business: Other	MODES		ROAD	COACH	RAIL	OTHER
User benefits	TOTAL		Private Cars and LGVs	Passengers	Passengers	
Travel time	15,647		15,647			0
Vehicle operating costs	0					
User charges	0					
During Construction & Maintenance	0					
NET NON-BUSINESS BENEFITS: OTHER	15,647	*(1b)*	15,647	0	0	0

Business							
				Business Cars			
User benefits			Goods Vehicles	& LGVs	Passengers	Freight	Passengers
Travel time	3,021			3,021			
Vehicle operating costs	0						
User charges	0						
During Construction & Maintenance	0						
Subtotal	3,021	*(2)*	0	3,021	0	0	0
Private sector provider impacts						Freight	Passengers
Revenue	0						
Operating costs	0						
Investment costs	0						
Grant/subsidy	0						
Subtotal	0	*(3)*			0	0	0
Other business impacts							
Developer contributions		*(4)*					
NET BUSINESS IMPACT	3,021	*(5) = (2) + (3) + (4)*					

TOTAL

Present Value of Transport Economic Efficiency Benefits (TEE)	25,055	*(6) = (1a) + (1b) + (5)*

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

Public Accounts (PA) Table - Comberton Greenway

	ALL MODES		ROAD	BUS and COACH	RAIL	OTHER
Local Government Funding	TOTAL		INFRASTRUCTURE			
Revenue	0					
Operating Costs	-815		-815			
Investment Costs	0					
Contributions	0					
Grant/Subsidy Payments	0					
NET IMPACT	-815	*(7)*				
Central Government Funding: Transport						
Revenue	0					
Operating costs	0					
Investment Costs	1,661,844					1,661,844
Contributions	0					
Grant/Subsidy Payments	0					
NET IMPACT	1,661,844	*(8)*				
Central Government Funding: Non-Transport						
Indirect Tax Revenues	1,591	*(9)*				1,591
TOTALS						
Broad Transport Budget	1,661,029	*(10) = (7) + (8)*				
Wider Public Finances	1,591	*(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.

Analysis of Monetised Costs and Benefits

Noise	328	*(12)*
Local Air Quality	321	*(13)*
Greenhouse Gases	13,036	*(14)*
Journey Quality	77,198	*(15)*
Physical Activity	1,940,637	*(16)*
Accidents	768,439	*(17)*
Economic Efficiency: Consumer Users (Commuting)	6,386	*(1a)*
Economic Efficiency: Consumer Users (Other)	15,647	*(1b)*
Economic Efficiency: Business Users and Providers	3,021	*(5)*
Wider Public Finances (Indirect Taxation Revenues)	- 1,591	*- (11) - sign changed from PA*
Present Value of Benefits (see notes) (PVB)	2,823,423	*(16) + (17) + (1a) + (1b) + (5) -*
Broad Transport Budget	1,661,029	*(10)*
Present Value of Costs (see notes) (PVC)	1,661,029	*(PVC) = (10)*
OVERALL IMPACTS		
Net Present Value (NPV)	1,162,394	NPV=PVB-PVC
Benefit to Cost Ratio (BCR)	1.7	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.

Appendix C

Appraisal Summary Table

Confidential

Appraisal Summary Table

Date produced:	4	1	2024

Contact:	
Name	Thomas Fitzpatrick
Organisation	GCP
Role	Promoter/Official

Name of scheme:	Horningsea Greenways
Description of scheme:	Horningsea Greenway is one the twelve Greater Cambridge Greenways that aim to make journeys easier, cheaper, healthier, greener and pleasant into and out of Cambridge as well as to enjoy the countryside for leisure purposes. Horningsea Greenway provides improvements to walking and cycling facilities between Horningsea and Fen Ditton.

Impacts		Summary of key impacts	Assessment					
			Quantitative				Qualitative	Monetary £(NPV)	Distributional 7-pt scale/ vulnerable grp
Economy	Business users & transport providers	The scheme will reduce journey times for both existing cyclists and new cyclists by providing new safer, more direct segregated cycling infrastructure. The scheme is expected to facilitate some mode shift from car to cycling and therefore will benefit the local highway network in terms of reduced congestion.	Value of journey time changes(£)				-	3,021	
			Net journey time changes (£)						
			0 to 2min	2 to 5min	> 5min				
	Reliability impact on Business users	Through providing a continuous improved walking and cycling route from Horningsea through Fen Ditton and onwards into Cambridge City Centre using other active travel routes, the Horningsea Greenway scheme will improve reliability for those travelling by active modes along the corridor.	-				Slight Beneficial		
	Regeneration	Scheme regeneration impacts are likely to be very small and have not been considered at this stage and therefore a qualitative assessment is not provided.	-				Not Assessed		
	Wider Impacts	Wider impacts have not been assessed at this stage of the scheme assessment. Improved cycling connectivity will provide better access to the labour market and jobs, but the scale of improvement is relatively small. Ttherefore a qualitative score has not been provided	-				Not Assessed		
Environmental	Noise	The scheme is expected to lead to a slight reduction in overall noise levels in the area as it would encourage a modal shift from car to cycling.	-				-	328	
	Air Quality	The scheme is expected to have a beneficial impact to air quality as it would encourage a modal shift from car to cycling.	-				-	321	
	Greenhouse gases	The scheme is expected to have a beneficial impact to greenhouse gas emissions as the scheme would encourage a modal shift from car to cycling.	Change in non-traded carbon over 60y (CO2e)				-	13,036	
			Change in traded carbon over 60y (CO2e)						
	Landscape	The scheme would have beneficial effects on the landscape pattern and neutral effects on landcover, the tranquillity, and cultural elements of the landscape. A strategic focus on landscape enhancement through new planting could result in slight benefits. Overall, impacts will be neutral.	-				Neutral		
		The scheme is anticipated to have a neutral effect on the layout, density and mix, scale, appearance, human interaction, culture, and land use of the townscape.	-				Neutral		
	Historic Environment	There will be direct impacts on the Fen Ditton Conservation Area and Horningsea Conservation Area arising from new signage, traffic calming measures and resurfacing works. It is anticipated that there will be a slight negative impact. Neutral impact is anticipated on the significance of the Grade II listed buildings within Fen Ditton Conservation Area, although changes to the settings. The proposal to remove the highway between the Grade II listed War Memorial and the Church is anticipated to result in a slight positive impact. Neutral impact on the significance of Grade II* listed buildings in the Fen Ditton Conservation Area and the Grade II listed buildings within the Horningsea Conservation Area. Impacts on the survival, condition, and complexity of the designated heritage assets, including listed buildings will be neutral. Impacts to the context will be neutral to slight impact. There will be a change to the context of Fen Ditton Conservation Area and Horningsea Conservation Area likely to result in a slight adverse impact. Impacts on the period of the designated heritage assets is considered neutral. The impact to non-designated heritage assets and buried heritage assets has not been determined at this stage. Overall, the summary assessment score is neutral to slight adverse / beneficial.	-				Neutral / Slight Adverse / Beneficial		

	Biodiversity	The scheme will reduce journey times for both existing cyclists and new cyclists by Impacts on the Eversden and Wimpole Wood Special Area of Conservation (SAC) and on the barbastelle bats that use the woods and are the principal reason for its European designation, will be neutral. Impact Fendland SAC designated for Molinia meadows on calcareous, pesty or clayey-silt-laden soils and Cladium mariscus and species of the Caricion davalliane is considered as neutral. There are five Local Nature Reserve (LNR) within 2km of the Proposed Scheme, consisting of grassland and scrub habitats with importance for birds and invertebrates. Impact to these LNR is considered neutral. Slight adverse impact is anticipated for the Ditton Meadows County Wildlife Site (CiWS), as a result of pollution risk from the Proposed Scheme. There are many hedgerows within the Proposed Scheme, with the majority acting as boundaries rather than crossing the Scheme. Impact to these hedgerows are considered neutral. A slight impact will impact protected species such as bats, Water vole (Arvicola amphibius), and Otter (Lutra lutra). Impact is considered neutral for the following species Amphibians (Great Crested Newt Triturus cristatus). birds, Barn owl Tyto alba, Reptiles (common and widespread species) Amphibians (Other amphibians), Hedgehog (Erinaceus europaeus) and Brown hare (Lepus europeaus). Overall, the summary assessment score is neutral to slight adverse.	-	Neutral / Slight Adverse		
	Water Environment	Surface water and groundwater features are located with 500m of the Proposed Scheme. River Cam and tributaries is channelled within the study area and has been assessed as magnitude level of slight beneficial, as runoff quality may increase due to a modal shift to green modes of transport and overall is considered insignificant adverse impact. A small area is within Flood Zone 2 and 3, but this are does not include any proposed works so unlikely to impact floodplain storage. There are numerous land drains and ditches in the area, flooding risk is considered as insignificant.With standard mitigation, any risks of chemical contamination of ground or surface waterbodies is not considered to be significant and therefore overall, the summary assessment score is neutral – slight adverse	-	Neutral / Slight Adverse		
Social	Commuting and Other users	The scheme will establish an improved cycle connection between Horningsea-Fen Ditton and onwards into Cambridge City Centre using other active travel routes. The scheme doesn't have much impact on journey time reduction although safer infrastructure are been proposed. The scheme is expected to facilitate some mode shift from car to cycling and therefore will benefit the local highway network in terms of reduced congestion.	**Value of journey time changes(£)** **Net journey time changes (£)** 0 to 2min / 2 to 5min / > 5min	-	22,033	
	Reliability impact on Commuting and Other users	Through providing a continuous walking and cycling route from Fen Ditton to Horningsea, the Horningsea Greenway scheme will improve reliability for those travelling by active modes along the corridor.	-	Slight Beneficial		
	Physical activity	The improvement to active mode facilities will encourage more cycling and pedestrian travel.	-	-	1,940,637	
	Journey quality	The improvements to the cycling and walking infrastructure along the route will improve the pleasantness of surroundings for users.	-	-	77,198	
	Accidents	The scheme is anticipated to result in a reduction in traffic movements as people are encouraged to use active modes. Users of motorised modes who shift mode to active modes will result in fewer vehicles and the number of highway accidents.	-	-	768,439	
	Security	The improved lighting provision along the route will increase the perception of safety for pedestrians and cyclists	-	Moderate Beneficial		
	Access to services	The expansion, and improvement, of cycling and pedestrian infrastructure provided by the Horningsea Greenway scheme will improve accessibility between Cambridge and Horningsea	-	Slight Beneficial		
	Affordability	Affordability will increase for cyclists who were previously bus or car users as the cost of travel will decrease as they will no longer pay fares or fuel and non-fuel vehicle operating costs.	-	Slight Beneficial		
	Severance	Introduction of the Horningsea Greenway will provide improved cycling facility between Horningsea and Cambridge, reducing the severance currently created due to the lack of a direct route between these settlements.	-	Slight Beneficial		
	Option and non-use values	The proposed scheme does not introduce new travel options.	-	Neutral		
Public Accounts	Cost to Broad Transport Budget	Cost of funding is split between local (operating costs) and central government funding (investment costs).	-	-	1,661,029	
	Indirect Tax Revenues	The scheme is expected to have a negative impact on tax revenues through mode shift to cylcing from car resulting in a small reduction in car kilometres is associated with a reduction in fuel duty.	-	-	-1,591	

Appendix D

Environmental Impact TAG Worksheets

Confidential

TAG Townscape Impacts Worksheet

	Step 2	Step 3					Step 4
Features	**Description**	**Scale it matters**	**Rarity**	**Importance**	**Substitutability**	**Changes in Without-scheme case**	**Impact**
Layout	The townscape of north-east Cambridge falls within the south and west portion of the 1km study area. It includes the residential areas of Milton, Barnwell and part of Chesterton, as well as Cambridge Business Park, Cambridge City Airport and Milton Country Park. The study area also includes the undeveloped floodplains of the River Cam, notably Stourbridge Common and Ditton Meadows and the primarily residential villages of Fen Ditton and Horningsea. The townscape has a small to medium grain of small and medium plot sizes, increasing is size within Cambridge Business Park. The townscape generally following a linear main road layout in Fen Ditton and Horningsea and a 1960s suburban layout in Barnwell.	The layout of the townscape matters on a local scale.	The townscape layout is typical.	The townscape layout is of medium to high importance at a local scale attributed to the two local designations of conservation areas in Fen Ditton and Horningsea.	The built townscape layout is substitutable however development of large areas of open space is not readily reversible.	Changes to the layout and grain without the Proposed Scheme are unlikely.	**Neutral Effect** The Proposed Scheme will integrate into the existing pattern of the townscape, following existing roads. There will be no impact on plot sizes, open spaces or the road layout associated with the Proposed Scheme. Overall, the Proposed Scheme will be a broadly imperceptible change to the townscape pattern.
Density and mix	The townscape is generally of low density including a mix of large detached residential houses in private plots and semi-detached residential properties. Cambridge Business Park occupies a mix of commercial uses in large buildings on large plots. Large areas of open green space are interspersed within the townscape and particularly towards the north on the urban fringe which give rise to small and medium sized agricultural fields.	The low density matters on a local scale.	The low density buildings is common locally and regionally.	The low density is of local importance.	Loss of low density built form is not readily reversible.	Changes to the density without the Proposed Scheme are unlikely.	**Neutral Effect** The introduction of the Horningsea Greenway would not impact the density and mix of the townscape and as such would have no impact on the density and mix of the wider townscape character.
Scale	Residential properties are small scale although some large properties are present. They are typically two to three storeys and either detached or semi-detached. Business Park buildings are large in scale, occupying large areas but remain 2-3 storeys in height.	The scale of buildings matters locally.	The scale of the buildings is common locally.	The small scale of buildings is of medium importance locally.	Loss of townscape scale is of low substitutability.	Changes to the scale of the townscape without the Proposed Scheme are unlikely.	**Neutral Effect** The introduction of the Proposed Scheme would not impact the scale of the Site and surrounding area.
Appearance	The townscape includes a mixture of architectural styles and periods with the dominant material being brick which is reflective of the gradual mix of urban expansion since the late 1800s. The townscape accommodates a tidy and spacious appearance with brick boundaries in the villages of Fen Ditton and Horningsea while to the south in Barnwell are wide tree lined streets with grass verges and fence or hedgerow boundaries. Howard Road in Barnwell adopts a tarmac road and separate subtly burgundy tarmac footway/cycleway on the northern side separated by a wide tree-lined grass verge. High Street and Horningsea Road in Fen Ditton are also tarmac roads with narrow footpaths either side, gray in colour. Horningsea Road within the village of Horningsea adopts a red/burgundy colour to the tarmac surface.	The townscape appearance matters on a local scale.	Townscape appearance is relatively common locally.	The appearance to the east is important locally.	The mixture of architectural styles is substitutable over time however the historic features and range is not readily substitutable.	Changes to the appearance of the townscape are unlikely.	**Neutral to Slight Adverse Effect** The Proposed Scheme will not change the appearance of built form within the existing townscape. The key change will be the use of red surfacing for the cycle lane on High Street in Fen Ditton. While this change is not large enough to affect the wider townscape appearance, a bright red would be at odds with the historic character and negatively local impact views resulting in a slight adverse effect.
Human Interaction	The townscape being predominantly residential has low human interaction with some interactions including shops, a public house, and bus stops on the village high streets. A shared cycle and pedestrian footway along PRoW 85/1 following the route of the Proposed Scheme provides some further human interaction.	The levels of human interaction matter on a local scale.	The levels of human interaction are common locally.	Provision of footways/cycleways are of high importance locally. Low levels of human activity are important to the quiet character.	Human interaction has a high potential for substitution.	Levels of human activity along High Street and Horningsea Road may increase as a result of the Proposed Scheme.	**Neutral Effect** The existing human activity including pedestrians and cyclists will likely be increased along High Street and Horningsea Road by the Proposed Scheme. However this will be along an already busy route and will likely be used as a thoroughfare rather than for human interaction with other townscape features.
Cultural	The townscape comprises numerous period buildings and sympathetic architecture that positively contribute to the cultural value of the townscape. They are locally designated by Conservation Areas. The cultural contribution is situated in the villages of Fen Ditton and Horningsea. The relatively modern architecture (post 1960s) of Barnwell is more notable in scale within the area but as they are generally set back from the roads and hidden from view they do not feature strongly within the visual townscape envelope.	The cultural contribution is important locally.	The cultural contribution is common locally.	The cultural contribution is of high importance locally.	The cultural contribution is not readily substitutable.	Changes to the cultural contribution of the townscape are low without the Proposed Scheme.	**Neutral Effect** Given that no features of cultural value would be altered as a result of the Proposed Scheme, the cultural contribution of the townscape will not change.
Landuse	The Proposed Scheme is situated within urban fringe, occupied by residential properties and some business park buildings. Agricultural fields punctuate the built up areas within the Study Area but are particularly abundant to the northern urban fringe between and around the villages of Fen Ditton and Horningsea. The open space is designated as Green Belt. The urban areas are occupied by footways and carriageways.	The land use matters locally. Green Belt open space matter regionally.	The land use is common locally.	The combination of land use is important locally. Open space within the Green Belt is important regionally.	Change of use of buildings is relatively easily reversed however this form of change is uncommon. Open space is irreplaceable. Land use of roads and cycleways is readily substitutable.	Changes to the land use of the site are unlikely without the Proposed Scheme.	**Neutral Effect** The change of land use would be in character with the existing.
Summary of Character	The townscape is of low scale residential urban fringe with villages at Fen Ditton and Horningsea. The road layout follows the main roads with tributary side streets. The area features buildings two villages that contribute to the cultural value and provide an attractive appearance. There is a quiet character off the main roads, particularly to the north where housing gives rise to agricultural fields protected under Green Belt. The low level of commercial buildings outside of Cambridge Business Park within the area has resulted in low levels of human interaction that create a generally quiet character.	Overall the townscape character in Fen Ditton and Horningsea matters locally where the townscape is designated locally by Conservation Areas. The open character to the north matters regionally and is protected as Green Belt.	Overall the townscape is relatively common.	Overall the townscape in the villages is important locally and the open nature of the townscape to the north is important regionally.	Overall the site and surrounding area is generally substitutable with the low density and areas of open space being not readily substitutable.	Overall, changes to the Site and surrounding area without the Proposed Scheme are unlikely.	**Neutral Effect** The Proposed Scheme will be notable at construction but would be short term and temporary in effect. Construction related activity is not out of character with a built-up area. During operation, changes will be largely imperceptible in the wider townscape causing no effect to layout, density, scale and cultural contribution. However the impact of red surfacing should be carefully considered in the designated locality of Fen Ditton Conservation Area to ensure the shade does not impact on the appearance of the culturally rich townscape. A bright red would result in a slight adverse effect. Overall, the changes are minor and do not impact wider townscape character and offer only minor changes to localised visual receptors.

Reference Sources

National Character Area Profile 88. Bedfordshire and Cambridgeshire Claylands (NCA 88) – Prepared by Natural England
Greater Cambridge Landscape Character Assessment (2021) - Prepared by Chris Blandford Associates
Fen Ditton Conservation Area Appraisal (2005) and Horningsea Conservation Area Appraisal (2005) - Prepared by South Cambridgeshire District Council
Ordnance Survey Mapping - 1:25,000
Google Maps Satellite Imagery

Step 5 - Summary Assessment Score

Neutral

Qualitative Comments

The Proposed Scheme will be notable at construction but would be short term and temporary in effect. Construction related activity is not out of character with a built-up area.
During operation, changes will be largely imperceptible in the wider townscape causing no effect to layout, density, scale and cultural contribution. However the impact of red surfacing should be carefully considered in the designated locality of Fen Ditton Conservation Area to ensure the shade does not impact on the appearance of the culturally rich townscape. A bright red would result in a slight adverse effect. Overall, the changes are minor and do not impact wider townscape character and offer only minor changes to localised visual receptors.

TAG Landscape Impacts Worksheet

	Step 2	Step 3				Step 4
Features	**Description**	**Scale it matters**	**Rarity**	**Importance**	**Substitutability**	**Impact**
Pattern	The pattern of the landscape within the wider 1km Study Area is largely of low-lying, broad and flat arable farmland forming part of the floodplain for the River Cam. Arable farmland offers a broad-scale landscape of large rectilinear fields bound by drainage ditches, intermittent roadside trees and gappy hedgerows. Smaller pastoral fields, for marshland grazing, adjacent to the River Cam are bound by trees. Settlement in the north consists of small historic villages with a strong linear form. Hedges, boundary trees and shelterbelts in and around the villages creates a distinctive localised vegetation pattern and more enclosed character than the open arable farmland. To the south west of the study area is the City of Cambridge with a mixture of urban built form.	The pattern of the landscape is typical of the local area.	The landscape pattern is common at all levels.	The landscape pattern is of medium importance at the local level.	Loss of roadside and footpath vegetation can be substituted. Loss of mature trees could be replaced in the medium to long term.	**Slight beneficial** The Proposed Scheme is similar to the existing baseline pattern of the landscape, following existing routes and field boundaries. There will likely be a minor impact on vegetation and trees to accommodate the Proposed Scheme where widening sections of existing shared footpath and cycle routes is proposed. However, there will be the opportunity for strengthening existing hedgerows and providing additional tree planting. Overall, the Proposed Scheme will improve existing shared footpath and cycle routes and there will be a broadly imperceptible change to the landscape patten.
Tranquillity	Large open arable fields with pockets of pastoral grazing fields along the river, interspersed villages and rural roads provide a medium level of tranquillity. The A14 dual carriageway, which runs east - west through the study area reduces tranquillity in surrounding localised areas. Cambridge City Airport is to the south of the study area, it is a regional airport for corporate and private use and flying instruction with no public scheduled flights. This with the built form and road network from the outskirts of Cambridge in the south of the study area also reduces the tranquillity.	Tranquillity in the Study Area matters at the local level.	Available levels of tranquillity in the Study Area are locally common.	Levels of tranquillity within the Study Area are of medium importance at the local level.	Tranquillity cannot be substituted.	**Neutral** The Proposed Scheme is likely to reduce traffic on local roads by encouraging vehicle users to cycle along the Greenway instead of driving. The potential reduction in traffic, could result in a slight beneficial effect on local tranquillity. However, the increased presence of movement from users of the Proposed Scheme will be visible within and around the study area. Screening vegetation planting such as hedgerows and cyclist speed reduction measures such as seating areas, surface changes and pinch points would reduce top speeds of cyclists.
Cultural	There are no nationally designated landscape sites such as National Parks or Areas of Outstanding Natural Beauty within the 1km Study Area. However, the Proposed Scheme and study area is within Green Belt land. Anglesey Abbey Grade II* Registered Park and Garden is approximately 3km to the west of the Proposed Scheme. Villages along the route of the Proposed Scheme are locally designated as Conservation Areas (Horningsea and Fen Ditton) and include numerous Listed Buildings. The historic layout of villages follows the routes of roads and the historic field boundaries and patterns remain. The expansion of villages has led to more dense housing and a contrast in architectural style with the historic core of the villages.	The Conservation Areas, settlement layout and field pattern matter at the local level. The Anglesey Abbey grade II* Registered Park and Garden matters at a national scale but is outside of the Study Area. The Green Belt matters at a planning policy level.	Cultural links found in the Study Area are common at local and regional level. Conservation Areas are locally noteworthy but not rare nationally.	Cultural landscapes in the study area are important at a site, local and regional scale.	Cultural landscapes cannot be substituted.	**Neutral** The Proposed Scheme would follow existing shared footpath and cycle routes and roads and would pass through Horningsea and Fen Ditton Conservation Areas. There should be careful consideration to the colour of surfacing material through the two conservation areas to ensure the shade does not impact on the appearance of the culturally rich townscape. Degradation to existing field boundaries and layout surrounding the Proposed Scheme is unlikely.
Landcover	Landcover surrounding the 1km study area is a mixture of village settlements and agricultural land comprised of medium to large, rectilinear arable fields with smaller pastoral fields close to villages and adjacent to the River Cam. The River Cam flows south to north, west of the Proposed Scheme, smaller fields of grazing marshland in the floodplain are enclosed with hedgerows and boundary trees. Woodland cover is low, however there are shelterbelts around settlements, along the River Cam and leading up to and along major roads (A14).	Landcover within the study area matters at the local level.	Landcover within the study area is locally common.	Landcover in the study area is of moderate importance at a local level.	Vegetation along field margins and roadsides across the study area are replaceable. Woodland and mature tree cover would be replaceable in the medium to long term.	**Neutral** As the Proposed Scheme follows existing shared footpath and cycle routes, lanes and roads, the loss associated with the Proposed Scheme to the existing landcover would generally be limited to some vegetation cover along Wadloes Path. There would be a slight adverse effect at a localised level along Wadloes Path. However, mitigation planting along the path and Proposed Scheme as a whole means there will be a nominal and broadly imperceptible impact on the local land cover.
Summary of character	Overall, the landscape character within the Study Area is that of a relatively flat and open rural landscape with medium to large, rectilinear arable fields and smaller pastoral fields around settlement edges and along the River Cam. Scattered linear villages along local roads are screened by groups of trees, hedgerows and shelterbelts. The A14, which runs through the centre of the Study Area, and Cambridge City Airport south of the study area limits localised levels of tranquillity. There will be some vegetation clearance along Wadloes Path to accommodate the Proposed Scheme. Throughout the rest of the study area, vegetation clearance would be minimal and there is an opportunity for hedgerow and tree planting to restore some of the characteristics of the landscape. Changes to views would be minimal and not out of context with the baseline. Numerous residential receptors are adjacent to the Proposed Scheme. However, the changes proposed are typical of a road environment and are similar to the baseline.	Overall the landscape character matters at the local level.	Overall the landscape character of the Study Area is nationally, regionally, and locally common.	Overall the landscape character of the Study Area is of low importance at a national level. At local level, and regional level in the case of Green Belt land, the landscape character is of moderate importance.	Overall the landscape character across the Study Area is replaceable in the medium to long term.	**Neutral** The Proposed Scheme will be notable during the construction phase but would be short term and temporary in effect. The minor vegetation losses associated with the Proposed Scheme will not be significant when considered in the context of the overall character of the area and there is an opportunity to introduce additional planting and restore/ enhance fragmented hedgerows along the route of the Proposed Scheme. During operation, changes to the overall landscape character would be largely imperceptible as the Proposed Scheme follows existing landscape patterns and routes with the potential to increase tranquillity. To prevent cyclists reaching high speeds near settlements, suggested speed reduction measures should be embedded in the design. To limit effects on Horningsea and Fen Ditton Conservation areas, surfacing materials should be chosen to compliment the historic character of the two conservation areas. Visual effects can be mitigated with good quality design to a level that is not considered to result in the potential for significant adverse effects. The Proposed Scheme is not significantly different to the baseline views and will represent only a slight change to those experienced by close residential receptors.

Reference Sources

National Character Area Profile 46. The Fens (NCA 46) and 88. Bedfordshire and Cambridgeshire Claylands (NCA 88) – Prepared by Natural England
Greater Cambridge Landscape Character Assessment (2021) - Prepared by Chris Blandford Associates
Extrium England Noise and Air Quality Viewer (2019) Available at: http://www.extrium.co.uk/noiseviewer.html
Ordnance Survey Mapping - 1:25,000
Google Maps Satellite Imagery
MAGIC Maps

Step 5 - Summary Assessment Score

Neutral

Qualitative Comments

Although the Proposed Scheme would be notable during construction, this would be short-term and temporary in effect. The existing adjacent landscape consists of broadly open agricultural land bound by drainage ditches, hedgerows and intermittent roadside trees. The minor vegetation losses associated with the Proposed Scheme will not be significant when considered in the context of the overall character of the area. There is an opportunity for mitigation and additional planting, with which most of the visual effects can be mitigated to a level which is not considered to result in the potential for significant effects within a period of 15 years. As the Proposed Scheme is not significantly different to the baseline views and will represent only a slight change to those experienced by site users currently, the impact of the Proposed Scheme is therefore considered to be Neutral.

TAG Historic Environment Impacts Worksheet

Step 2					Step 4
Feature	**Description**	**Scale it matters**	**Significance**	**Rarity**	**Impact**
Form	**Designated heritage assets (possibly physically affected by the Proposed Scheme)** in the 50m study area 1. Fen Ditton Conservation Area 2. Horningsea Conservation Area **Designated heritage assets (possible setting impact)** in the 50m study area 3. 4 Grade II* listed buildings within the Fen Ditton Conservation Area 4. 16 Grade II listed buildings within the Fen Ditton Conservation Area 5. 15 Grade II listed buildings within the Horningsea Conservation Area **Potential Known and Unknown Non-designated Archaeological Remains** 6. The potential, and therefore the form of archaeological remains, is unknown at this time	1-5. The protection of listed buildings and Conservation Areas is a national concern (Planning (Listed Buildings and Conservation Areas) Act 1990). 6. The form of currently unknown buried archaeological remains are of indeterminate importance. However, archaeological remains could be of local to national importance.	1,2. The Conservation Areas are of High significance. 3. The Grade II* listed buildings are of High significance. 4,5. The Grade II listed buildings are of Medium significance. 6. The significance of the form of currently unknown buried archaeological remains could be of Low to High significance.	1,2. There are nearly 10,000 Conservation Areas in England. Although not rare, they are identified by the local authority as having a definite architectural quality or historic interest to merit designation. 3. Nationally, 5.8% of listed buildings are Grade II*, making them particularly important buildings. 4,5. Nationally, 92% of listed buildings are Grade II, making them less rare but still of national importance. 6. The form of currently unknown buried archaeological remains are of indeterminate rarity. However, the form of archaeological remains could be common locally to rare internationally.	The Proposed Scheme aims to encourage sustainable travel in and out of Cambridge for cyclists, pedestrians and equestrians. It comprises of twelve Greenway routes including the Horningsea Greenway route. The route follows existing quieter streets, off-road paths falling within the rural setting and busier roads and footpaths of the urban setting. The changes relate to modifications of the public realm comprising proposed concrete cycleways, tree removal, planting areas, signage, road widening works, relining works and re-surfacing works, parking areas and traffic control measures. Within the Fen Ditton Conservation Area, it is proposed to enhance the existing road infrastructure by adding traffic calming measures (20MPH speed limit signs) along with the additional street parking areas for both motorists and cyclists. Within the Horningsea Conservation Area, it is proposed to enhance the existing road infrastructure by adding traffic calming measures (20MPH speed limit signs). **Designated heritage assets (possibly physically affected by the Proposed Scheme)** 1,2. There will be direct impacts on the Fen Ditton Conservation Area and Horningsea Conservation Area arising from new signage, traffic calming measures and resurfacing works. It is anticipated that there will be a slight negative impact to the form of the Fen Ditton Conservation Area and the Horningsea Conservation Area. **Designated heritage assets (possible setting impact)** 4. The nature of the proposals means there is likely to be a neutral impact on the significance of Grade II listed buildings within the Fen Ditton Conservation Area, through changes to the settings. The proposal to remove the highway between the Grade II listed War Memorial and the Church is anticipated to result in a slight positive impact. 3,5. As currently designed the proposals would have a neutral impact on the significance of Grade II* listed buildings in the Fen Ditton Conservation Area and the Grade II listed buildings within the Horningsea Conservation Area, through changes to the settings. **Potential Archaeological Remains (possible physical and setting impact)** 6. Impacts on the form of unknown archaeology is unknown at this time.
Survival	1,2. The Conservation Areas are likely to have a good level of survival. 3-5. The listed buildings are likely to have a good level of survival. 6. The survival of any unknown archaeological remains is unknown at this time	1-5 The survival of designated heritage assets matter on a national scale. 6. The survival of currently unknown buried archaeological remains matters on an indeterminate scale but could range from a local to international scale.	1-5. The significance of the survival of designated elements of the historic environment is high. 6. The significance of survival of currently unknown buried remains is unknown at this time.	1-5. The survival of the designated elements of the historic environment are common locally but rare nationally. 6. The rarity of the survival of currently unknown buried archaeological remains is indeterminate at this stage, but could be from common locally to rare internationally.	1-5. It is anticipated that there will be a neutral impact on the survival of these designated heritage assets or their relationship with their setting. 6. Impacts on the survival of potential archaeological remains is unknown at this time.
Condition	1,2 The condition of the Conservation Areas is unknown. 3-5. The condition of the listed buildings is unknown. 6. The condition of currently unknown buried archaeological remains is indeterminate at this stage but could range from poor to good.	1-5. The condition of designated heritage assets matters on a national scale. 6. The scale at which the condition of currently unknown buried archaeological remains matter is currently indeterminate, but could be of a local to international importance.	1-5. The significance of the condition of the designated heritage assets is expected to vary from low to high due to the number and nature of designated historic environment resources. 6. The significance of the condition of currently unknown buried archaeological remains is indeterminate at this time.	1-5. The rarity of the condition of the designated heritage assets varies from common locally to rare nationally. 6. The rarity of the condition of currently unknown buried archaeological remains is indeterminate, but could range from common locally to rare internationally.	1-5. Considering the nature and scale of the Proposed Scheme it is anticipated that there will be a neutral impact upon the condition of these designated heritage assets. 6. Impacts on the condition of potential archaeological remains is unknown at this time.
Complexity	1,2. The complexity of the Conservation Areas is unknown. 3-5. The complexity of the listed buildings is unknown. 6. The complexity of any potential archaeological remains is unknown at this time.	1-5. The scale at which the complexity of designated heritage assets matters is considered to be national. 6. The scale at which the complexity of currently unknown buried archaeological remains matter is indeterminate, but could be from local to international.	1-5. The significance of the complexity of the designated elements of the historic environment is low to high. 6. The significance of the complexity of currently unknown buried archaeological remains is indeterminate at this time.	1-5. The rarity of the complexity of designated heritage assets is common locally and rare nationally. 6. The rarity of the context of currently unknown buried archaeological remains is indeterminate but could be from common locally to rare internationally.	1-5. The Proposed Scheme is not anticipated to impact the complexity of the designated heritage assets. The impact is therefore neutral. 6. Impacts on the complexity of potential remains is unknown at this time.
Context	1. Rural (within Fen Ditton village) 2. Rual (within Horningsea village) 3-6 Rural and Urban	1-5. The context of designated heritage assets matters on a local to national scale. 6. The context of currently unknown buried archaeological remains is indeterminate.	1-5. The significance of the context of the designated heritage assets is low to high. 6. The significance of the context of currently unknown buried archaeology is indeterminate at this time.	1-5. The rarity of the context of the designated heritage assets is common locally but rare nationally. 6. The rarity of the context of currently unknown buried archaeological remains is indeterminate at this time but could be from common locally to rare internationally.	1,2. There will be a change to the context of Fen Ditton Conservation Area and Horningsea Conservation Area likely to result in a slight adverse impact. 1-5. The small-scale nature of the proposals means there is likely to be a neutral impact to the context of these designated heritage assets. 6. Impacts on the context of potential archaeology is unknown at this time
Period	1,2. Post-Medieval 3. Later Medieval and Post-Medieval 4. Post-Medieval 5. Later Medieval and Post-Medieval 6. Data relating to potential archaeological remains is unavailable at this time	1-5. The period of the designated heritage assets is considered to matter on a regional to national scale. 6. The scale at which the periods represented by currently unknown buried archaeological remains matter are indeterminate at this stage.	1-5. The period of the heritage assets does not necessarily affect their heritage significance. 6. The significance of the periods represented by currently unknown buried archaeological remains is unknown at this time.	1-5. The rarity of the periods represented by the designated heritage assets is common to townscapes and villages nationally. 6. The rarity of the period of currently unknown buried archaeological remains is indeterminate at this stage but could be from common locally to rare internationally.	1-6. The Proposed Scheme will have a neutral impact on the period of the heritage assets.

Reference Sources

National Heritage List for England - List of statutorily designated heritage assets.
Local Planning Authority website - Conservation Area data.
A site walkover was not undertaken.

Step 5 - Summary Assessment Score

Slight Adverse Effect

Qualitative Comments

There are 4 Grade II* listed buildings, 31 Grade II listed buildings and two Conservation Areas within the 50m study area.
The Proposed Scheme passes through the Fen Ditton Conservation Area and Horningsea Conservation Area. There will be a direct slight adverse impact on the two Conservation Areas resulting from small-scale changes.
The Proposed Scheme also presents opportunities for the enhancement of heritage assets through interpretation (e.g. trails and appropriate boards along the route). This could be explored as part of the design stage.
The Proposed Scheme, as currently designed, would have a neutral effect on the listed buildings within 50m of the proposed route. The proposed removal of the highway between the Grade II listed War Memorial and the churchyard in Fen Ditton would improve the immediate setting of the asset.
An assessment of non-designated heritage assets has not been completed at this stage. The Proposed Scheme has the potential to result in the partial or complete loss of buried heritage assets in areas where ground disturbance is proposed outside of the existing highway, principally relating to the construction of new footways, widening of current paths and the removal and planting of trees.
Within agricultural fields, any archaeological remains present will be found immediately below the topsoil.
The potential to impact upon buried archaeological remains would be dependent upon the nature of any ground disturbance proposed.

TAG Biodiversity Impacts Worksheet

Step 2		Step 3				Step 4	Step 5
Area	**Description of feature/ attribute**	**Scale (at which attribute matters)**	**Importance (of attribute)**	**Trend (in relation to target)**	**Biodiversity and earth heritage value**	**Magnitude of impact**	**Assessment Score**
Eversden and Wimpole Woods Special Area of Conservation (SAC)	Ancient coppice woodland (Eversden Wood) and high forest woods likely to be of more recent origin (Wimpole Woods). Designated for Annex II species that are a primary reason for selection of this site: - Barbastelle *Barbastella barbastellus*	**International**	**High -** Primary species of importance is barbastelle, a species of bat. A colony is associated with trees in Wimpole Woods. The colony uses trees as a summer maternity roost and the wider area for foraging. Flight paths such as hedgerows and other parts of woodland may be used when bats forage outside the SAC.	**Unknown** - The population trend of the colony is unknown as is the extent and availability of offsite habitat. The following document has been published that includes specific restoration targets for the qualifying features of the SAC: *European Site Conservation Objectives: Supplementary advice on conserving and restoring site features (Natural England 2019).*	**Very high** - Internationally important site with limited potential for substitution.	**Neutral** - The Proposed Scheme will not impose any direct or indirect impact on the SAC. The Proposed Scheme is 14km north east of the SAC which is out side the Core Sustenance Zone (CSZ; a measure of the area on which the bat colony depends for feeding) of the SAC and it is considered unlikely that barbastelle roost on Site. Additionally whilst some individual trees may be lost for the Proposed Scheme, no full hedgerows or lines of trees will be lost, and so commuting and foraging habitat will not be impacted.	**Neutral**
Fenland Special Area of Conservation (SAC)	The Fenland SAC is a network of three wetland sites comprising Woodwalton Fen, Wicken Fen and Chippenham Fen. These consist of habitats including fens and marshes with areas of deciduous woodland small areas of arable land and inland water bodies including drainage ditches. The Proposed Scheme is 8.5km from the nearest of the three SAC wetland sites, Wicken Fen. The SAC has Annex I habitats which are the primary reason for the sites designation: - 6410 *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*); and -7210 Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae* The SAC also has Annex II species present but these are not the primary reason for designation: -1149 Spined loach *Cobitis taenia;* -1166 Great crested newt *Triturus cristatus*	**International**	**High -** Habitats that are a primary reason for designation include *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*) and Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae.* The Fenland holds one of the most extensive examples of the tall herb-rich East Anglian type of M24 *Molinia caerulea – Cirsium dissectum* fen-meadow. It is important for the conservation of the geographical and ecological range of the habitat type, as this type of fen-meadow is rare and ecologically distinctive in East Anglia.	**Varying** - The trend for the target features which are the reason for the SAC's designation vary at each of the three wetland sites. However at Wicken Fen, which is the closest of the three sites, all features are in favourable condition.	**Very high** - Internationally important site with limited potential for substitution.	**Neutral** - The Proposed Scheme will not impact the Fenland SAC as it is 8.5km away and not ecologically or hydrologically connected to it. Furthermore, the Proposed Scheme is considered to be of a low impact in an already urban landscape.	**Neutral**
Local Nature Reserves (LNR)	There are five LNR's within 2km of the Proposed Scheme. These comprise: -Barnwell LNR; grassland -Barnwell II LNR; -Coldhams Common LNR; -Bramblefields LNR; and -Logan's Meadow LNR These sites consist of grassland habitats with scrub and are important for birds and invertebrates.	**National**	**Medium-** Various LNR around Cambridge consisting of grassland and scrub habitats with importance for birds and invertebrates.	**Unknown** - A trend in relation to the target feature is not known.	**High -** Statutory Designated Sites	**Neutral -** The Proposed Scheme will not impact the LNR's as the closest site is 0.9km east of the Proposed Scheme and not connected hydrologically or through wildlife corridors. Furthermore, the Proposed Scheme is considered to be of a low impact in an already urban landscape.	**Neutral**

TAG Biodiversity Impacts Worksheet

Step 2		Step 3				Step 4	Step 5
Area	**Description of feature/ attribute**	**Scale (at which attribute matters)**	**Importance (of attribute)**	**Trend (in relation to target)**	**Biodiversity and earth heritage value**	**Magnitude of impact**	**Assessment Score**
Ditton Meadows County Wildlife Site (CiWS)	The CiWS lies within the flood plain of the River Cam. A central drain qualifies as species rich linear water body and also, for NVC S6 Greater Pond-sedge swamp. Coldham's Brook which is within the CiWS qualifies as unmodified chalk stream.	**Local**	**Low-** Non-statutory designated site	**Unknown** - A trend in relation to the target feature is not known.	**Low -** Non-Statutory Designated Sites	**Neutral -** The Proposed Scheme is 0.06km east of the CiWS**,** and directly connected hydrologically and ecologically. There is potential for the Proposed Scheme to result in pollution of the CiWS, and pollution control measures will need to be in place. With pollution control impacts to the CiWS will be neutral.	**Neutral**
Non-Statutory Designated Sites	There are six County Wildlife Sites (CWS) and 11 further CiWS as well as one Protected Road Verge within 2km of the Proposed Scheme.	**Local**	**Low-** Non-statutory designated site	**Unknown** - A trend in relation to the target feature is not known.	**Low -** Non-Statutory Designated Sites	**Neutral -** The Proposed Scheme is not expected to impact any of these non-statutory designated sites, as there is a lack of hydrological links, or wildlife corridors connecting the Proposed Scheme to the non-statutory designated sites. Furthermore the Proposed Scheme is considered to be of low impact in an already urban landscape.	**Neutral**
Hedgerows (including potential Important hedgerows)	There are many hedgerows within the Proposed Scheme. Further surveys would need to be undertaken to determine if any of the hedgerows are considered 'Important Hedgerows' under the Hedgerows Regulations 1997.	**Local**	**High -** Review of satellite imagery and information in the ecological constraints report by Milestone (2022) has identified a number of hedgerows within the Proposed Scheme. Hedgerows are an important landscape feature and provide habitat connectivity and high value to a range of wildlife.	**Declining** - The lengths of managed hedgerow decreased by 6.1% in the UK between 1998 and 2007. Abundance and distribution of hedgerow trees is declining, as recognised by the Countryside Survey 2000. Old and mature hedgerows are uncommon in Cambridge. Hedgerows are listed as a Priority Habitat within Cambridge.	**Medium** - A Local value habitat with limited potential for substitution.	**Neutral -** The hedgerows act as boundaries rather than being crossed by the Proposed Scheme. It is considered unlikely that they will be impacted by the Proposed Scheme.	**Neutral**
Bats	Habitats present within the footprint of the Proposed Scheme, include, hedgerows, mature trees and scrub. These provide suitable habitat for foraging, commuting and roosting bats. A biological records search has identified nine bat species within 2km of the Proposed Scheme including brown long-eared bat *Plecotus auratus* , common pipistrelle *Pipistrellus pipistrellus* , Daubenton's bat *Myotis daubentoni*i, Nathusius' pipistrelle *Pipistrellus nathusii* , noctule bat *Nyctalus noctule* , serotine *Eptesicus serotinus* , soprano pipistrelle *Pipistrellus pygmaeus* , Natterer's bat *Myotis nattereri* and leislers bat *Nyctalus leisleri.* Further survey is required to determine whether roosting bats are present within suitable roosting habitat within and adjacent to the Proposed Scheme.	**National**	**Medium -** hedgerows intersecting the Proposed Scheme may be used by commuting and foraging bats. Trees could be suitable for roosting bats.	**Varying** - Species dependant- Some bat species have decreased in England and some have increased.	**High** - All bats are protected under the Conservation of Habitat and Species Regulations 2017.	**Minor Negative-** Some individual trees may be lost to the Proposed Scheme and a Ground Level Tree Assessment will be required to assess whether they are suitable for roosting bats. The Proposed Scheme is not anticipated to impact any hedgerows, however lighting has been proposed between two lines of trees. This will need to be designed sensitively to bats to avoid disturbance to foraging and commuting bats.	**Slight Adverse**

TAG Biodiversity Impacts Worksheet

Step 2		Step 3				Step 4	Step 5
Area	**Description of feature/ attribute**	**Scale (at which attribute matters)**	**Importance (of attribute)**	**Trend (in relation to target)**	**Biodiversity and earth heritage value**	**Magnitude of impact**	**Assessment Score**
Badgers *Meles meles*	Badgers are offered protection under the Protection of Badgers Act 1992. Hedgerows, scrub and grassland provide suitable habitat for foraging badgers, and suitable locations for sett construction. A biological records search identified that the closest record of badger was 1.29km south west of the Proposed Scheme.	**Local**	**Low -** suitable habitat is present within the footprint of the Proposed Scheme based on satellite imagery. A badger survey of the Proposed Scheme has not yet been undertaken.	**Unknown** - The county trend for this species is not known within Cambridgeshire, however nationally badgers have shown a significant increase in numbers (c.88% since the 1980s).	**Low** - badger are a species of medium biodiversity value on a national and local level.	**Minor Negative-** A badger survey has not been undertaken for the Proposed Scheme, and further surveys have been recommended to identify whether there are any badgers within suitable sett building habitat.	**Slight Adverse**
Water vole *Arvicola amphibius*	Water voles are protected under Schedule 5 of the Wildlife and Countryside Act (1981) and the Conservation of Habitats and Species Regulations (2017). Open Source maps indicates that there is one drainage ditch which runs adjacent to a southern section of the Proposed Scheme. A biological records search identified that the closest water vole recording was just 0.03km south of the Proposed Scheme. It is therefore likely that water vole could be present within the footprint of the Proposed Scheme.	**Regional**	**Low** - One drainage ditch runs adjacent to the Proposed Scheme and it is unknown whether they provide suitable habitat for water vole.	**Declining** - According to the National Water Vole Database and Mapping Project (McGuire and Whitfield, 2017).	**High -** Water vole is a species of high biodiversity value.	**Minor Negative -** the Proposed Scheme has the potential to impact the terrestrial banks of the ditch. A survey will be undertaken, and a mitigation strategy for the Proposed Scheme based on the findings of these surveys will be required.	**Slight Adverse**
Otter *Lutra lutra*	Otters are protected under Schedule 5 of the Wildlife and Countryside Act (1981) and the Conservation of Habitats and Species Regulations (2017). Open Source maps indicate that there one drainage ditch which runs adjacent to a southern section of the Proposed Scheme. A biological records search identified that the closest otter recording was 0.14km west of the Proposed Scheme. At this stage a survey has not been undertaken and it is unknown whether it provides suitable habitat for otter.	**Regional**	**Low** - One drainage ditch runs adjacent to the Proposed Scheme and it is unknown whether they provide suitable habitat for otter.	**Increasing** - According to research by the Wildlife Trust and the Cambridgeshire Mammal Group in 2022 otter populations are increasing nationally and have been increasing in Cambridgeshire since 1990.	**High** - Otter is a species of high biodiversity value.	**Minor Negative** - the Proposed Scheme has the potential to impact the banks of the ditch with unknown potential for otter. A survey will be undertaken, and a mitigation strategy for the Proposed Scheme based on the findings of these surveys will be required.	**Slight Adverse**
Birds	Habitats present, such as scrub, hedgerows, trees, arable crops and grassland are suitable for use by common and widespread nesting birds. All wild birds, and their nests whilst in use, are protected under the Wildlife and Countryside Act (1981). A biological records search identified 44 bird species recorded within 2km of the Proposed Scheme.	**Local**	**Low -** impacts to breeding birds are anticipated to be minimal due to the limited habitat loss required to facilitate the Proposed Scheme**.**	**Varying** - Species dependent - some bird species are in significant decline nationally and locally within Cambridgeshire.	**Low -** The Proposed Scheme is likely to support a diverse range of breeding and wintering bird species of local importance.	**Neutral -** Following the implementation of suitable precautionary measures during construction works, the Proposed Scheme would result in negligible impacts to breeding birds because of negligible habitat loss anticipated. There would be no operational impacts on birds.	**Neutral**
Barn owl *Tyto alba*	Barn owl are a Schedule 1 species under the Wildlife and Countryside Act (1981) and protected from disturbance during nesting. Further survey is required to determine whether trees within and adjacent to the Proposed Scheme are suitable for nesting barn owl.	**Regional**	**High -** Barn owl is a Schedule 1 species. Further survey is required to determine whether any trees lost to the Proposed Scheme are suitable for nesting barn owl.	**Increasing**- The '*State of the UK Barn Owl population - 2021'* report suggests an overall rise in nesting occupancy of known barn owl nest locations across the UK. Cambridgeshire has a significant local population.	**Medium** - Barn owl are of medium biodiversity value on a National and Local level.	**Neutral -** It is anticipated that minimal trees will be removed and further survey will determine whether barn owls are present. Should they be found to be present mitigation will be focused on avoidance strategies. No collision risk to barn owls once the Proposed Scheme is operational as the Proposed Scheme will be designed to support non-motorised users only.	**Neutral**

TAG Biodiversity Impacts Worksheet

Step 2		Step 3				Step 4	Step 5
Area	**Description of feature/ attribute**	**Scale (at which attribute matters)**	**Importance (of attribute)**	**Trend (in relation to target)**	**Biodiversity and earth heritage value**	**Magnitude of impact**	**Assessment Score**
Reptiles (common and widespread species)	Native widespread reptile species (adder *Vipera berus* , common lizard *zootoca vivipara* , grass snake *Natrix helvetica* and slow worm *Anguis fragilis*) are protected from killing and injury under Schedule 5 of the Wildlife and Countryside Act (1981). Reptiles, such as grass snake, slow worm and common lizard, may be present in low numbers in suitable habitat such as grassland, hedgerow margins and scrub. There is no suitable habitat for adder within the footprint of the Proposed Scheme. A biological records search identified common lizard and grass snake within 2km of the Proposed Scheme.	**Local**	**Low** - reptiles are likely to be present in low numbers in habitats adjacent to the Proposed Scheme. With minimal habitat to be removed for the Proposed Scheme, it is unlikely to impact reptiles at more than a local level.	**Varying -** Species dependent - numbers of grass snake and slow worm are in general decline nationally, but fairly common in Cambridgeshire.	**Medium** - reptiles are a species of medium biodiversity value on a national and local level.	**Neutral -** minimal habitat is due to be removed for the Proposed Scheme. Through the implementation of precautionary works during the construction phase, the Proposed Scheme would have only negligible impacts on reptiles. The potential killing/ injury of any reptiles on Site will be avoided.	**Neutral**
Amphibians (Great Crested Newt *Triturus cristatus)*	Great crested newts (GCN) are protected under the following legislation: - Annexes II and IV of the Habitats Directive - Conservation of Habitats and Species Regulations (Schedule 2) - Wildlife and Countryside Act (1981) (Schedule 5). Great crested newts are also listed as SPI in accordance with Section 41 of the NERC Act 2006. There are two ponds within 250m of the Proposed Scheme. It is unknown whether these ponds are suitable for great crested newts. There is suitable terrestrial habitat for great crested newts within the footprint of the Proposed Scheme and a biological records search has identified great crested newts within 2km of the Proposed Scheme.	**Local**	**Medium** - two ponds within 250m of the Proposed Scheme which may be suitable for breeding great crested newt.	**Declining -** GCN population has declined over much of European range (Froglife 2001), however they are widespread across England and Wales. Significant proportion of national population within Cambridgeshire and Peterborough, with the largest UK (possibly largest European) population near Peterborough**.**	**High** - GCN are of high biodiversity value on a local and national level.	**Neutral -** minimal habitat is due to be removed for the Proposed Scheme. Impacts should be neutral on completion of the Proposed Scheme, but there is a low level of risk through the construction phase, and therefore precautionary works should be undertaken under a Non-Licensed Method Statement (NLMS). However harm to great crested newts is considered highly unlikely according to the Natural England Rapid Risk Assessment Tool for great crested newts and with the NLMS in place impacts will be neutral.	**Neutral**
Amphibians (Other amphibians)	There is likely suitable terrestrial habitat on Site for other common amphibian species additionally to GCN including the common toad, which is a SPI in accordance with Section 41 of the NERC Act 2006. There are two ponds within 250m of the Proposed Scheme. There is suitable terrestrial habitat on Site within 250m of these ponds. Additionally, ponds are not separated from the Site by a major barrier such as a dual carriageway or major water course. Potential terrestrial habitat includes hedgerows, tree lines and grassland. A biological records search has identified toads within 2km of the Proposed Scheme.	**Local**	**Low -** amphibians are likely to be present in low numbers in habitats adjacent to the Site. With minimal habitat to be removed for the Proposed Scheme, it is unlikely to effect amphibians at more than a local level.	**Varying -** Species dependent	**Low -** Amphibians (with exception of great crested newts) are of low biodiversity value.	**Neutral -** minimal habitat is due to be removed for the Proposed Scheme. Following the implementation of precautionary works during the construction phase, potential impacts of the Proposed Scheme on amphibians would be negligible.	**Neutral**

TAG Biodiversity Impacts Worksheet

Step 2		Step 3				Step 4	Step 5
Area	**Description of feature/ attribute**	**Scale (at which attribute matters)**	**Importance (of attribute)**	**Trend (in relation to target)**	**Biodiversity and earth heritage value**	**Magnitude of impact**	**Assessment Score**
Hedgehog (*Erinaceus europaeus*)	Habitats within the footprint of the Proposed Scheme include hedgerows and scrub which offer valuable habitat to hedgehogs. This species is a SPI.	**Local**	**Low** - Minimal habitat will be lost.	**Declining -** According to the State of Britain's Hedgehogs 2022 report by the Peoples Trust For Endangered Animals and the British Hedgehog Preservation Society, Hedgehogs are declining nationally.	**Low** - Hedgehog are a species of low biodiversity value on a national and local level.	**Neutral -** The Proposed Scheme comprises a narrow, linear site which will impact small areas of scrub. The hedgerows within the footprint of the Proposed Scheme act as boundaries and would not be removed or crossed.	**Neutral**
Brown hare *Lepus europeaus*	Habitats within the footprint of the Proposed Scheme include open arable farmland and fields, which offer valuable habitat to brown hare. This species is a SPI.	**Local**	**Low** - brown hare are relatively widespread within the UK.	**Declining -** brown hare have been in decline for the last 100 years, by 80% according to the Hare Preservation Trust, 2022. The species is however common and widespread in Cambridgeshire (Cambridgeshire Mammal Group, 2016).	**Low** - brown hare are a species of low biodiversity value on a national and local level.	**Neutral -** The Proposed Scheme comprises a narrow, linear site which would impact negligible areas of potentially suitable arable and grassland habitat.	**Neutral**

Reference Sources

Cambridgeshire And Peterborough Environmental Records Centre (CPERC) 2023 Horningsea Biological Records Search

Cambridge City Council Biodiversity Strategy 2022 - 2030: https://www.cambridge.gov.uk/media/11066/biodiversity-strategy.pdf

Cambridgeshire Mammal Group, 2016 Cambridgeshire Mammal Atlas http://www.cambsmammalgroup.org.uk/atlas.pdf

Wildlife Trust and Cambridgeshire Mammal Group Cambridgeshire and Peterborough Otter Survey 2022 https://www.wildlifebcn.org/sites/default/files/2022-05/Otter%20Survey%20Report%202022_small.pdf

Wildlife and Countryside Act 1981: http://www.legislation.gov.uk/ukpga/1981/

NERC Act Section 41 Species of Principal Importance: http://publications.naturalengland.org.uk/publication/4958719460769792.

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Froglife, 2001 Great Crested Newt Conservation Handbook https://www.froglife.org/wp-content/uploads/2013/06/GCN-Conservation-Handbook_compressed.pdf

BTO reptile declines: https://www.bto.org/sites/default/files/shared_documents/publications/research-reports/2010/rr572.pdf

Milestone Infrastructure, 2022, Horningsea Greenways Ecology Constraints and Badger Survey Report

Peoples Trust For Endangered Species & British Hedgehog Preservation Society The State of Britain's Hedgehogs 2022 https://www.hedgehogstreet.org/wp-content/uploads/2022/02/SoBH-2022-Final.pdf

The Hare Preservation Trust Brown Hare History & Status http://hare-preservation-trust.com/species-status/brown-hare-history-status/

McGuire, C. & Whitfield, D. National Water Vole Database and Mapping Project https://www.wildlifetrusts.org/sites/default/files/2018-05/water_vole_report_2006-2015_final.pdf

Summary Assessment Score

Slight Adverse

Qualitative Comments

Overall the Assessment Score is "slight adverse" due to potential impacts affecting bats, badgers, otter, water vole and great crested newts, largely due to small areas of habitat removed to facilitate the Proposed Scheme, and potential impacts on watercourses.
Mitigation proposals should be developed which may include the following mitigation and enhancement measures:
-Pollution control measures;
-Precautionary works and a NLMS for great crested newts;
-Wildlife planting, to include areas with wildflowers;
- Woodland understory planting to improve species richness and condition of retained woodlands;
- Log piles and hibernacula for wildlife, in particular reptiles, this would be of particular value in the rural areas of the Site including within hedgerow margins and woodland;
- Bird and bat boxes;
- Invertebrate hotels.

TAG Water Environment Impacts Worksheet

Description of study area/ summary of potential impacts	Key environmental resource	Features	Quality	Scale	Rarity	Substitutability	Importance	Magnitude	Significance
Study area: Surface water and groundwater features located within c.500m of the Site and/or hydraulically connected to the Site have been considered.	River Cam and tributaries	Water supply	Main river. 'Moderate' WFD status. Likely to support local water supplies.	Local	Low	Limited potential for substitution	Medium	Negligible	Insignificant
Potential Impacts: •Increase to surface water flood risk due to increased impermeable surface area. •Increased pollution risk to surface water features.		Transport and dilution of waste products	Medium - Failed WFD chemical status for priority hazardous substances. Feature likely receives water treatment effluence.	Local	Low	Cannot be substituted	Medium	Slight Beneficial - runoff quality may increase due to a modal shift to green modes of transport.	Insignificant
		Biodiversity	Moderate' ecological WFD status. No known fish species or designations.	Local	Low	Limited potential for substitution	Low	Negligible	Insignificant
		Aesthetics	Heavily modified	Local	Low	Limited potential for substitution	Low	Negligible	Insignificant
		Cultural Heritage	No known cultural assets	Local	Low	Limited potential for substitution	Low	Negligible	Insignificant
		Recreation	River Cam adjacent and upstream of the Ditton meadow near proposed site is known to be used for rowing and canal boats.	Local	Medium	Limited potential for substitution	Medium	Negligible	Insignificant
		Value to economy	The River Cam near the site is known to be frequently used by canal boats.	Local	Medium	Limited potential for substitution	Medium	Negligible	Insignificant
		Conveyance of flow and material	Flows in predominantly rural areas and under multiple clear span bridges within the area of the site. Towards the north of the Proposed Scheme, near Horningsea the River Cam flows through a weir and a lock.	Local	Low	Limited potential for substitution	Low	Negligible	Insignificant
	Land Drains and ditches	Water supply	Ordinary watercourses, unlikely to be part of local water supplies.	Local	Low	Limited potential for substitution	Low	Negligible	Insignificant
		Transport and dilution of waste products	Ordinary watercourses.	Local	Low	Limited potential for substitution	Low	Slight Beneficial - runoff quality may increase due to green modes of transport being more accessible.	Insignificant
		Biodiversity	Small watercourses, not monitored by WFD. No known fish species or designations.	Local	Low	Limited potential for substitution	Low	Negligible	Insignificant
		Aesthetics	Straightened watercourses.	Local	Low	Limited potential for substitution	Low	Negligible	Insignificant
		Cultural Heritage	No known cultural assets.	Local	Low	Limited potential for substitution	Low	Negligible	Insignificant
		Recreation	No known recreation uses.	Local	Low	Limited potential for substitution	Low	Negligible	Insignificant
		Value to economy	No known commercial uses.	Local	Low	Limited potential for substitution	Low	Negligible	Insignificant
		Conveyance of flow and material	Flow in predominantly rural areas, along the boundaries of fields.	Local	Low	Limited potential for substitution	Low	Negligible	Insignificant
Potential decrease in flood plain storage	Floodplain	Conveyance of flood flows	The vast majority of the Proposed Scheme is located in Flood Zone 1. A small area is within Flood Zone 2 and 3, but this area does not include any proposed works so unlikely to impact floodplain storage.	Regional	Low	Limited potential for substitution	Medium	Negligible	Insignificant
		Biodiversity	Located in an area with a 'Moderate' ecological WFD status. No known fish species or designations.	Local	Low	Limited potential for substitution	Low	Negligible	Insignificant
		Aesthetics	Site is mostly located in a rural area.	Local	Low	Limited potential for substitution	Low	Negligible	Insignificant

TAG Water Environment Impacts Worksheet

Description of study area/ summary of potential impacts	Key environmental resource	Features	Quality	Scale	Rarity	Substitutability	Importance	Magnitude	Significance
* Increased pollution risk to Groundwater * Modifications to groundwater conditions (locally) including alterations to groundwater level and flow * Reduction of groundwater recharge (locally) to superficial and bedrock aquifers due to increased hard surface areas	Groundwater (superficial aquifers)	Water supply (groundwater level and flow)	Not located near a groundwater source protection or within a drinking water safeguard zone (groundwater). It is unclear at this stage if private (licensed and unlicensed) abstractions exist in proximity to the Proposed Scheme targeting superficial aquifers (Alluvium and River Terrace Deposits)	Local	Low	Limited potential for substitution	Low	Slight (Adverse) - localised impacts expected where changes in groundwater level and flow may occur as a result of alternation to groundwater recharge	Insignificant
		Groundwater quantity and quality	Located within a Nitrate Vulnerable Zone. Superficial deposits designated Secondary A Aquifers - provide limited / local supply	Local	Low	Cannot be substituted	Low	Slight (Adverse) - localised impacts due to scheme development activities i.e. resurfacing	Insignificant
	Groundwater (bedrock aquifers)	Water supply (groundwater level and flow)	Not located near a groundwater source protection or within a drinking water safeguard zone (groundwater). It is unclear at this stage if private (licensed and unlicensed) abstractions exist in proximity to the Proposed Scheme targeting principal bedrock aquifer (West Melbury Marly Chalk Formation).	Regional	Medium	Limited potential for substitution	High	Negligible - no significant impact expected on water supply, groundwater level and flow	Insignificant
		Groundwater quantity and quality	High and High & Medium groundwater vulnerability zones designated along length of the Proposed Scheme attributed to the West Melbury Marly Chalk Formation. Soluble rock risk identified (assigned to Chalk). Cam and Ely Ouse Chalk Groundwater Waterbody (ID GB40501G400500) overall Poor WFD status.	Regional	Medium	Cannot be substituted	High	Slight (Adverse) - Chalk exposed at surface. Localised impacts on groundwater recharge due to increased impermeable areas. Localised impacts on groundwater quality due to increased sedimentation risk as a result of proposed development activities i.e. resurfacing	Insignificant
	Groundwater (superficial and bedrock aquifers)	Transport and dilution of pollutants	At this stage no records of formal infiltration based drainage have been provided. Informal infiltration may occur on highway ditches that are assumed to be unlined.	Local	Low	Cannot be substituted	Low	Slight Beneficial - runoff quality may increase due to a modal shift to green modes of transport.	Insignificant
		Value to economy	No known commercial uses.	Local	Low	Cannot be substituted	Low	Negligible	Insignificant
		Biodiversity including GWDTE (Groundwater Dependent Terrestrial Ecosystem)	Provides baseflow to rivers	Local	Medium	Cannot be substituted	Medium	Negligible - no known GWDTEs or direct impact to major watercourses expected	Insignificant

Reference Sources

OS Mapping, MAGIC GIS Portal, British Geological Survey, Environment Agency's online maps for flood risk and Environment Agency's Catchment Data Explorer.

Summary Assessment Score

Neutral - Slight Adverse

TAG Water Environment Impacts Worksheet

Description of study area/ summary of potential impacts	Key environmental resource	Features	Quality	Scale	Rarity	Substitutability	Importance	Magnitude	Significance

Qualitative Comments

Review of the EA's Flood Map for Planning (Rivers and Sea) indicates that the Site is predominantly located in Flood Zone 1. Review of the EA's Flood Risk from Surface Water map indicates that there are small areas at risk to surface water flooding to the south of the Proposed Scheme, near Ditton Meadows and to the north of the Proposed Scheme within Horningsea. The River Cam is classified as a Main River.

Localised impacts (specifically groundwater quality) to groundwater receptors i.e. abstractions, superficial and bedrock aquifers due to increased sedimentation risk / discharge during construction activities. Currently, there is limited data relating to the presence of private (licensed and unlicensed) water supplies and depth to groundwater table. Bedrock aquifer (West Melbury Marly Chalk Formation) is exposed at surface and will be intercepted by the Proposed Scheme. Increased impermeable surface area may result in localised impacts on reduced recharge to aquifers, although impacts are not expected to be significant. At this stage it is assumed that no intrusive works, likely to extend below the groundwater table (superficial and bedrock geologies), are anticipated.

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