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OP5 APPENDIX 16.5 – **TRANSPORT STRATEGY**

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APPLICATION CONTENTS

OTTERPOOL PARK

Transport Strategy

CONTENTS

FIGURES

TABLES

Executive Summary

ES1. This Transport Strategy document has been prepared to provide the overarching Transport approach of the Otterpool Park development. It sets out the need for the development and presents the numerous transport enhancements and services proposed to be delivered as part of Otterpool Park.

ES2. Otterpool Park is a proposed new garden settlement which will comprise up to 8,500 homes together with retail, commercial, education, health, community uses and associated infrastructure. This sustainable new community is a site of strategic importance intended to meet Folkestone and Hythe District Council's identified need for new housing and growth.

ES3. A Transport Assessment (Environmental Statement (ES) Appendix 16.4) has been undertaken using the traditional approach, agreed with the highway authorities, of 'predict and provide' methodology derived from historic trip rate patterns. This results in a worst-case scenario for vehicle trips generated by the development, and the Assessment provides confidence that even in this scenario there are appropriate highway infrastructure proposals that can mitigate the effects. Nevertheless, this is not the desired approach for the development.

ES4, The Transport Strategy has been introduced to provide more progressive mobility interventions for Otterpool Park. The future of travel and the movement of goods is changing. With the advances to technology, changes to the way we work and a shift in the way we access services and buy goods are influencing the way we travel. The vision is to promote sustainable and active travel modes through the offer at Otterpool Park such that the need for long distance travel and reliance on the private vehicle is reduced. This is consistent with the Folkestone and Hythe District Council's aim to achieve the net-zero emissions target by 2030 and the Government's Ten Point Plan for a Green Industrial Revolution, of which Point Five is Green public transport, cycling and walking.

ES5. The Transport Strategy is founded on the following principles:

- Create walkable neighbourhoods and a high street highly accessible by walking and cycling.
- Provide strong walking, cycling and bus connections to rail station, employment, high street, local centres and schools from residential areas.
- Provide wider connectivity by walking, cycling and bridleways into surrounding countryside and existing communities.
- Ensure a high level of connectivity to and from Otterpool Park within the sub-region by frequent high-quality public transport.
- Minimise and manage the impacts of traffic on existing road network particularly through existing communities and other sensitive areas.
- Provide appropriate levels of parking for cars and bicycles.
- Implement a range of sustainable travel behavioral measures to encourage use of sustainable modes.
- Provide for future needs for electric vehicles and flexibility to adapt to innovative future mobility solutions.
- Reduce the need to travel by providing relevant on-site facilities.

ES6. There will be a high proportion of local trips made within Otterpool Park as the development incorporates a range of schools, healthcare, community and sports facilities to meet as many of the needs of residents as possible and will minimise the need to travel to other locations. There will be local shopping and services and on-site employment locations together with the infrastructure for home working.

ES7. A user-centric approach has been adopted as part of the Future Mobility plan for the development. The principles of this approach are to put the mobility needs of the users first, through undertaking an online survey of respondents who meet the demographic characteristics of future residents of Otterpool Park to understand their travel behaviour and requirements, and to design and develop the

infrastructure to meet these needs. A monitor and manage approach will allow for the iterative refinement of these solutions.

ES8. The outcomes from the user-centric approach have allowed for some ambitious Mode Share targets to be derived. These would be supported by the comprehensive range of transport measures proposed at the development:

- Walking and Cycling Strategy – providing a highly connective and permeable network of routes both within the development and also to link to the wider area of existing footpaths and bridleways.
- Bus Service Enhancements – providing high-quality bus infrastructure that will make this travel mode an attractive option for short and longer journeys.
- Rail Enhancements – Improvements to the Westenhanger Rail Station and supporting proposals of future High-Speed services (subject to wider deliverability) at the Station as outlined in Kent's Rail Strategy 2021.
- Shared Mobility Schemes – Provision of bike and scooter share schemes, including electric options. Car club provision will offer development users who do not require a car on a regular basis the option to drive without the high cost and long-term maintenance associated with the private car.
- Mobility Hubs – facilities that integrate shared, active and public transport modes in one location as well as bringing opportunities create attractive places.
- MaaS (Mobility as a Service) - a single digital application to enable users to plan, book and pay for multiple types of mobility, with a single payment channel instead of multiple ticketing and payment operations.
- Healthy Streets Approach – promoting healthy lifestyle through active travel, sustainable choices, safety and connectivity.
- Parking Strategy – achieving an appropriate balance of parking for overall requirements of the development that accommodates parking but does not unduly encourage car ownership and use.
- EV Strategy - a bespoke EV charging point strategy for each phase of the development to be developed to support electric charging network and emerging technology.
- Delivery and Servicing Strategy - consider how to utilise emerging technologies and deliver a sustainable and efficient freight system that is fit for the future.

ES9. These measures will be balanced against ensuring that the highway access arrangements are robust enough to sustain additional traffic movements, provide connectivity to existing routes and allow the existing network to function within reasonable limits without causing congestion and accessibility issues for Otterpool Park and existing local residents.

ES10. The Otterpool Park development and associated transport strategies will provide residents, employees and visitors with an attractive and comprehensive network of sustainable travel opportunities to provide viable alternatives to travel by private car. The Transport Strategy proposals are summarised in Figure *1*.

ES11. A summary of the social, environmental and economic benefits of the Transport Strategy are in the following table:

Attribute	Benefits of Transport Strategy Principles
Social	• Community Centres and other Leisure facilities will retain trips within the development, increasing internalisation • Physical, mental health and wellbeing associated with promotion of active lifestyle • Inclusive and equality provided through travel options available
Environmental	• Reduction in car trips, particularly compared to the TA approach means reduction in carbon emissions. • EV Strategy will facilitate the reduction in emissions. • Delivery and Service Strategy will seek to consolidate deliveries and there are options to provide last mile delivery using sustainable modes, resulting in less carbon emissions within the development • Reduced physical highway infrastructure
Economic	• Commercial, retail and business land uses delivered as part of the development will bring employment opportunities for residents • Provision of great transport choice will provide better connectivity to access jobs

ES12. The proposed approach at Otterpool Park is to go beyond existing policy requirements and respond to emerging policy and technology advances. It is intended that the worst-case vehicle trip generation scenario forecast in the Transport Assessment will not be reached, because site users will opt to travel using the sustainable alternative modes offered by the development instead.

ES13. The infrastructure of the Masterplan will be complemented by bespoke green travel measures, which will build on the opportunities offered by the existing and proposed walking, cycling, equestrian and public transport infrastructure, and promote and develop sustainable travel opportunities as well as support low emissions vehicles and innovative transport solutions.

ES14. The Transport Strategy principles will promote sustainable and active travel which will bring social, economic and environmental benefits to Otterpool Park users.

Otterpool Park – The new Garden Town will be enriched with green spaces that create plentiful opportunities to walk, play, explore and socialise.

Otterpool Park – Transport Strategy - will provide residents, employees and visitors with an attractive and comprehensive network of sustainable travel opportunities to provide viable alternatives to travel by private car.

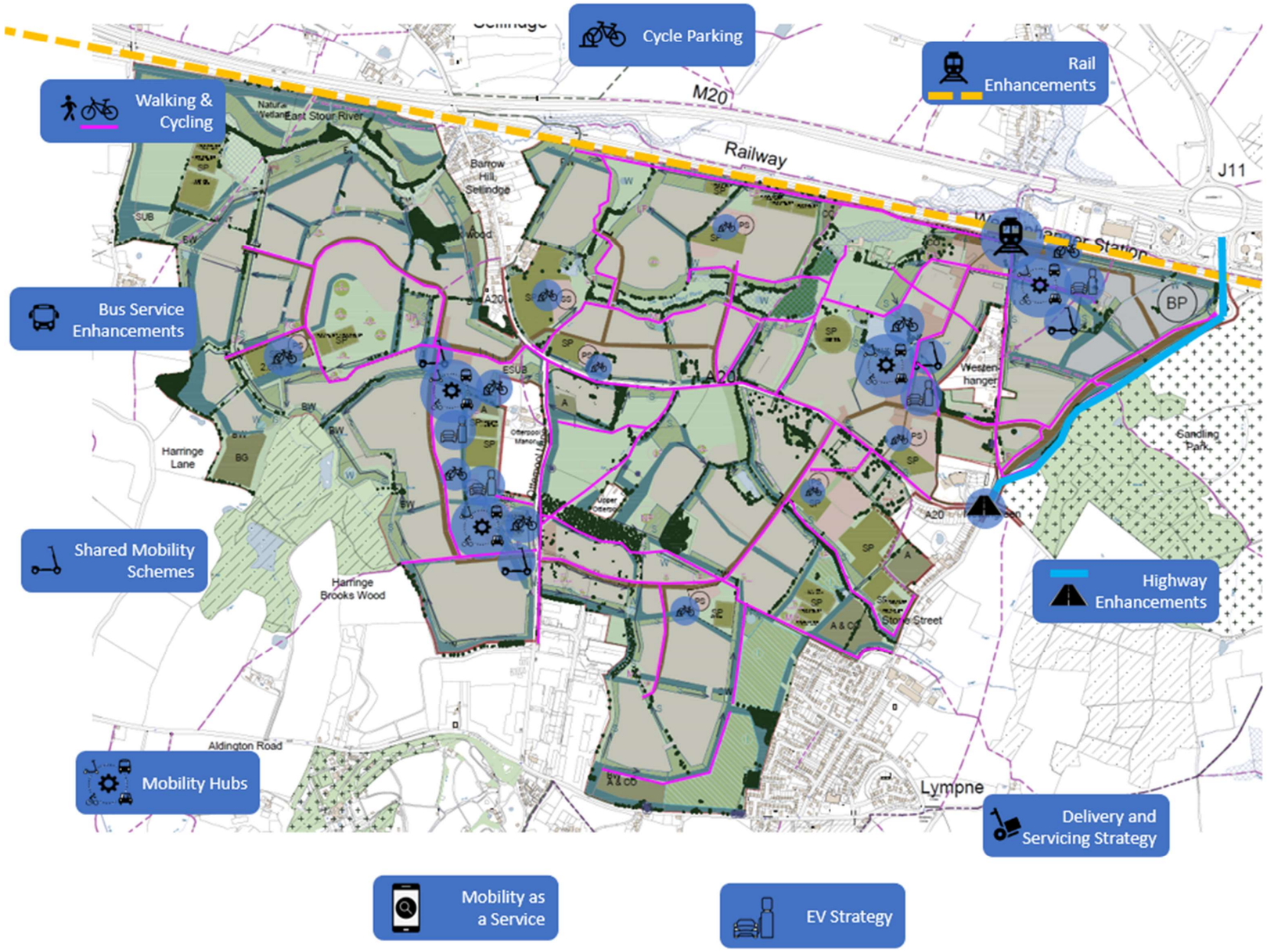


Figure 1: Integrated Transport Strategy

Transport Strategy Principles

- Walkable neighbourhoods
- Sustainable Mode Connectivity to site facilities
- Wider connectivity to surrounding communities
- External public transport connectivity
- Minimise and manage the impacts of traffic on existing road network
- appropriate levels of parking for cars and bicycles
- a range of sustainable travel behavioural measures
- future needs for electric vehicles
- innovative future mobility solutions

Transport Strategy Outcomes

Environmental Outcomes

Potential 31% reduction of CO_2 based on reduction of daily vehicle trips generated by the site achieving Best Case Mode Share scenario (User Centric Approach) compared to TA approach (worst case for vehicles).

Social Outcomes

Should the Best Case scenario be achieved, this would reduce the effects of climate change, leading to economic cost to society, health and wellbeing benefits for individuals, such as leading longer healthier lives and reducing the burden on the taxpayer by reducing visits to healthcare services.

Economic Outcomes

Keeping trips local will drive improvements to the economy of the local communities through the employment and retail facilities.

1 Introduction

1.1.1 This Transport Strategy document sets out the transport approach to the Otterpool Park development and provides the overarching principles of the transport items and transport related strategies. This Chapter establishes the site context and sets out the vision for the development.

1.2 Need for Development

1.2.1 The need for a new garden settlement in Folkestone and Hythe arises from the acknowledged housing crisis across the country due to the severe lack of house building over a 30-year period. One such measure is the identification of sites for the provision of new garden settlements. In 2016 the Government published a prospectus to local authorities asking them to express an interest in provision of such settlements within their administrative areas. After considering the potential of Folkestone and Hythe district to accommodate such a settlement to meet the local housing need, an Expression of Interest was submitted by Folkestone and Hythe District Council (FHDC) (then Shepway District Council (SDC) in July 2016 proposing Otterpool Park as a new garden settlement.

1.2.2 On 11 November 2016 the Government announced its support for Otterpool Park. The priority on providing more housing in the UK was also emphasised in the February 2017 Housing White Paper "Fixing our Broken Housing Market". The Otterpool Park Garden Town Employment Opportunities Study (2017) identifies a range of potential sectors and premises that could be targeted to drive employment growth including advanced manufacturing, a business park, and dispersed workspaces in local centres. These types of provision are largely absent from the current employment land portfolio and will widen the market appeal of the district for inward investment from other parts of Kent and further afield.

1.3 Existing Situation

1.3.1 The Otterpool Park application site is located on 589ha of land within a rural countryside setting in the administrative area of Folkestone & Hythe District Council in Kent. Due to the nature of the site, it currently lends itself to being mainly accessible by private vehicle. Otterpool Park is directly south-west of Junction 11 of the M20 motorway, and south of the HS1 and local rail link including Westenhanger Station.

1.3.2 Walking accessibility through the site is currently restricted and there are no designated cycle routes in the immediate vicinity.

1.3.3 Although there are existing public transport links to the site, these are generally limited. Buses run an hourly service only, however, the existing bus service does pass through the central part of the Otterpool Park site, presenting opportunities to enhance existing services to serve future residents.

1.3.4 The rail services at Westenhanger Station are hourly at off-peak periods and weekends, with two trains an hour during peak periods. Though, the train services do provide links to key destinations such as Ashford where High Speed (HS1) as well as regular services to London depart from. Westenhanger Station however has inadequate facilities including a lack of car parking, no cycle parking provision and limited mobility access.

1.3.5 The M20 motorway runs in the east-west direction to the north of the site and connects Kent with the M25 and London. It terminates in the east at Junction 13, on the northern outskirts of Folkestone. The M20 within the vicinity of Otterpool Park comprises three lanes in either direction, subject to the national motorway speed limit.

1.3.6 The A20 is a major distributor road in Kent and crosses the Otterpool Park area from east to west and also forms the north-eastern boundary of the area. The A20 Ashford Road provides access to the M20, via Junction 11. The road consists of a single carriageway

subject to a 50mph limit through the site, reverting to 40mph limit through Barrow Hill and 30mph through Sellindge village in the north west.

1.3.7 The existing site location plan including the different transport provisions are shown in Figure 2.

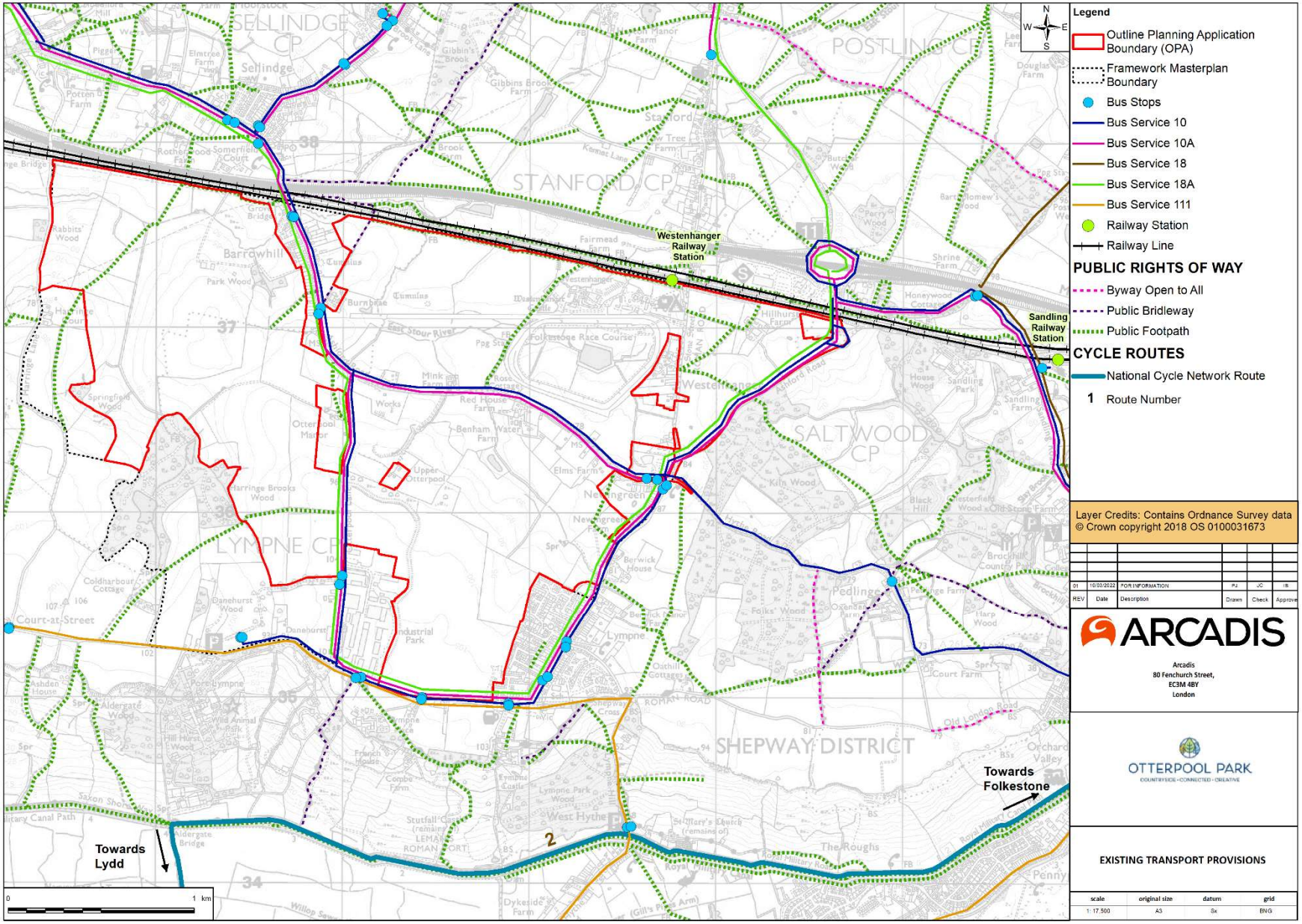


Figure 2: Existing Transport Provision of Otterpool Park Site

1.4 Vision for Otterpool Park

1.4.1 The Otterpool Park development will provide new homes along with associated amenities including employment, retail, education, leisure and community facilities. Otterpool Park will be influenced by the travel needs of the existing and future communities. The aim is to strike the right balance between ensuring the Garden Town is a great place to live and work with all the amenities its population needs, while also providing easy connections to and from neighbouring communities.

1.4.2 There will be a high proportion of local trips made within Otterpool Park as the development incorporates a range of schools, healthcare, community and sports facilities to meet as many of the needs of residents as possible and minimise external travel to and from the site. There will be local shopping and services and on-site employment locations together with the infrastructure for home working.

1.4.3 The infrastructure of the Masterplan will be complemented by bespoke green travel measures, which will build on the opportunities offered by the existing and proposed walking, cycling, equestrian and public transport infrastructure, and promote and develop sustainable travel opportunities as well as support low emissions vehicles and innovative transport solutions.

1.5 Contents of the Transport Strategy

1.5.1 The remaining Chapters in this Transport Strategy comprises the following:

- Chapter 2: summarises the relevant transport policy and guidance
- Chapter 3: provides an overview of the Transport Assessment
- Chapter 4: establishes the Principles of the Transport Strategy
- Chapter 5: reports on the Future Mobility Approach
- Chapter 6: presents the Mode Share Targets of the development
- Chapter 7: reports the proposed Accessibility and Mobility Integration at the site
- Chapter 8: highlights the Street Design Approach
- Chapter 9: presents the Parking Strategy
- Chapter 10: describes the Delivery and Servicing Strategy
- Chapter 11: sets out the potential benefits resulting from the principles of the Transport Strategy
- Chapter 12: summarises and concludes this Strategy document

2 Planning Policy Context

2.1 Policy Need for Development

2.1.1 The delivery of Otterpool Park would supply part of the housing need identified by FHDC, where 14,600 new homes will need to be built between 2014 and 2037. At the moment, the area has completed or has plans for, some 8,000 homes – leaving a deficit of 6,600 up to 2037. Homes will be needed beyond this date too. With FHDC being the principal landowner at the proposed site, the council can help to provide a solution meet the future needs of the district.

2.1.2 Such a settlement will provide an opportunity to deliver a major positive change to the environment, social aspects and the economy of the district. The need for the Otterpool Park development has been acknowledged by FHDC and is part of the Core strategy review.

2.2 Planning Policy

2.2.1 The relevant national, regional and local policy and guidance documents that influence the Otterpool Park development proposals and its Transport Strategy are summarised in Figure 3.

2.3 Summary

2.3.1 The policies and guidance seek an emphasis on development in locations where sustainable travel modes can be encouraged and can facilitate access by all modes.

2.3.2 The Otterpool Park Transport Strategy will be following the sustainable transport approach set out in the policies, and in particular it is aligned with the principles of the Transport for the South East Transport Strategy which seeks to move away from ‘planning for vehicles’ and towards ‘planning for people’ and ‘planning for places’.

2.3.3 The masterplan for Otterpool Park has been developed, through consultation with Folkestone & Hythe District Council, Kent County Council and other key stakeholders, to create a highly sustainable garden settlement.

National Planning Policy

National Planning Policy Framework 2021

Chapter 9 Promoting Sustainable Transport has been reviewed and used as a guide in the making of the Otterpool Park Transport Strategy.

The Strategic Road Network and the Delivery of Sustainable Development – Department for Transport Circular 02/13

Highways England expects the promoters of development to put forward initiatives that manage down the traffic impact of proposals to support the promotion of sustainable transport and the development of accessible sites.

Other Guidance

- A Charter for Otterpool Park, 2017 - Although not planning policy, Folkestone & Hythe District Council has produced a Charter setting out its aspirations for Otterpool Park (2017). The Charter included principles focusing on creating a place that is environmentally, socially and economically sustainable.
- The Kent Design Guide (Kent Design Initiative, December 2005), adopted by FHDC in 2007
- Kent County Council Interim Guidance Notes 1, 2 and 3 (2008)
- Decarbonising Transport, (DfT, 2021)
- Kent Rail Strategy (2021)
- The Design Manual for Roads and Bridges, (DfT, various dates)
- The Manual for Streets, (Department for Communities and Local Government (DCLG) / DfT, 2007)
- The Manual for Streets 2, CIHT, 2010 – a companion guide to Manual for Streets (DCLG / DfT, 2010)
- Travel Plan Guidelines, (DfT, various dates).

Regional Planning Policy

Transport for the South East – Transport Strategy June 2020

The over-arching regional strategy seeks to move away from traditional methods of planning based on current practise to an approach that actively chooses a preferred future and formulating a plan to get there as a community. It seeks to move away from 'planning for vehicles' towards a focus surrounding 'planning for people' and 'planning for places.'

Kent Local Transport Plan 4: Delivering Growth without Gridlock 2016-2031 (2016)

Relevant to this development the LTP states:

"There is substantial future housing growth in the district, including the proposed Otterpool Park garden town, which will require considerable infrastructure investment to support this new town, including upgrading Westenhanger Station."

Local Plan Written Statement – Appendix 6: Kent County Council Vehicle Parking Standards, 2009

Appendix 6, of the full Local Plan Review written statement sets out the parking standards which were saved under the March 2009 Direction from the Secretary of State following the adoption of the Core Strategy Local Plan 2013. Policy TR12 states that:

"New development, redevelopment or a change of use will only be permitted if it makes provision for off street parking on or near the site in accordance with the current maximum vehicle parking standards, as set out in Appendix 6."

Local Planning Policy

Folkestone & Hythe District Council Transport Strategy, 2011

The strategy considers both transport matters which relate to the existing district area, as well as those relating to the potential Strategic Site allocations which have been made for future development.

It sets out requirement to improve walking, cycling and managing parking provision.

Core Strategy Review 2022

Policy SS1 District Spatial Strategy states:

"The potential for significant sustainable development in the district is focused on maximising strategic infrastructure where landscape capacity exists, with the creation of a new settlement in the North Downs Area. This will be a major, long-term growth opportunity, developed on garden town principles during the plan period and beyond. Policies SS6-SS9 set out rigorous design requirements and ambitious environmental and sustainability targets that the new settlement must meet to ensure its potential is realised."

Policy SS6 finds that the Development would present the major opportunity to secure a high-speed rail service between Westenhanger and London St Pancras.

Policy SS7 outlines the place shaping principles for sustainable access and movement for the new Otterpool Park settlement, including:

- The development shall be underpinned by a movement strategy which prioritises walking, cycling and access to public transport
- The development shall incorporate smart infrastructure to provide real-time transport information
- A permeable network of tree-lined streets, lanes, pathways, bridleways, cycleways and spaces will be created that provides connections throughout the development as appropriate
- Road infrastructure should be designed for a low speed environment, with priority given to pedestrians and cyclists
- A parking strategy shall be developed that balances the necessity of car ownership with the need to avoid car parking that dominates the street scene to the detriment of local amenity.
- The existing bus network that serves the surrounding towns and villages will be upgraded and new services provided.

Places and Policies Local Plan, Adopted September 2020

The Places and Policies Local Plan identifies specific sites considered suitable for development throughout the district to provide up to 2,500 new homes and land for offices, community uses and other types of development.

Transport Policies sets out the car and cycle parking standards and requirements for electric vehicle charging points.

Figure 3: Policy and Guidance Documents that influence Otterpool Park Transport Strategy

3 Overview of Transport Assessment

3.1 Background

3.1.1 The Transport Assessment (TA) (ES Appendix 16.4) has been undertaken to support the outline planning application of the development of the Otterpool Park settlement accommodating up to 8,500 homes with related highways, green and blue infrastructure.

3.1.2 The scope of the TA was first discussed and agreed with Kent County Council (KCC), FHDC and Highways England (HE), now National Highways (NH), during discussions between July 2017 and July 2018. An outline planning application was submitted in 2019 based on the agreements resulting from these discussions.

3.1.3 Following submission of the application, further comments relating various elements of the 2019 TA were received. The current TA seeks to address and resolve the items raised by KCC, FHDC and HE (now NH).

3.2 TA Approach

3.2.1 The objective of the TA is to assess the potential transport impact of and determine the transport infrastructure necessary to support the development. It identifies the necessary mitigation measure that will be required such that the development does not severely impact the existing transport infrastructure on-site and in the surrounding area. This assessment considers all modes of transport, particularly the active modes of transport such as walking, cycling and public transport.

3.2.2 To provide a robust assessment, the traditional method of “predict and provide”, derived from historic trip rate patterns for the potential trips generated by the development, has been adopted. This approach relies on various sources of data including 2011 Census, TRICS survey and the National Travel Survey. The method to derive the trips generated by Otterpool Park is summarised in Figure 4.

3.2.3 This approach will generate a worst case for car trips as it is based on data that is up to 10 years old and does not consider any step changes to the derived mode shares based on current travel patterns and more sustainable travel choices to be promoted by the development. Nonetheless, the TA demonstrates key improvement measures across the highway network can be achieved to mitigate the transport impacts of these worst case generated car trips.

3.2.4 As a result of the outcomes of the TA, a highway strategy has been developed based on the main access to Otterpool Park being from Junction 11 of the M20 via the A20 in order to accommodate the worst case estimated vehicle trips generated by the development. It is recognised that traffic will also use other routes. However, through upgrading the route from Junction 11 and thus providing high quality linkages, traffic impacts on other routes will be minimised. Furthermore, the approach is to mitigate impacts on the network but not to provide significant capacity increases elsewhere that encourage car use or the use of more sensitive routes. The highway access strategy is shown in Figure 5.

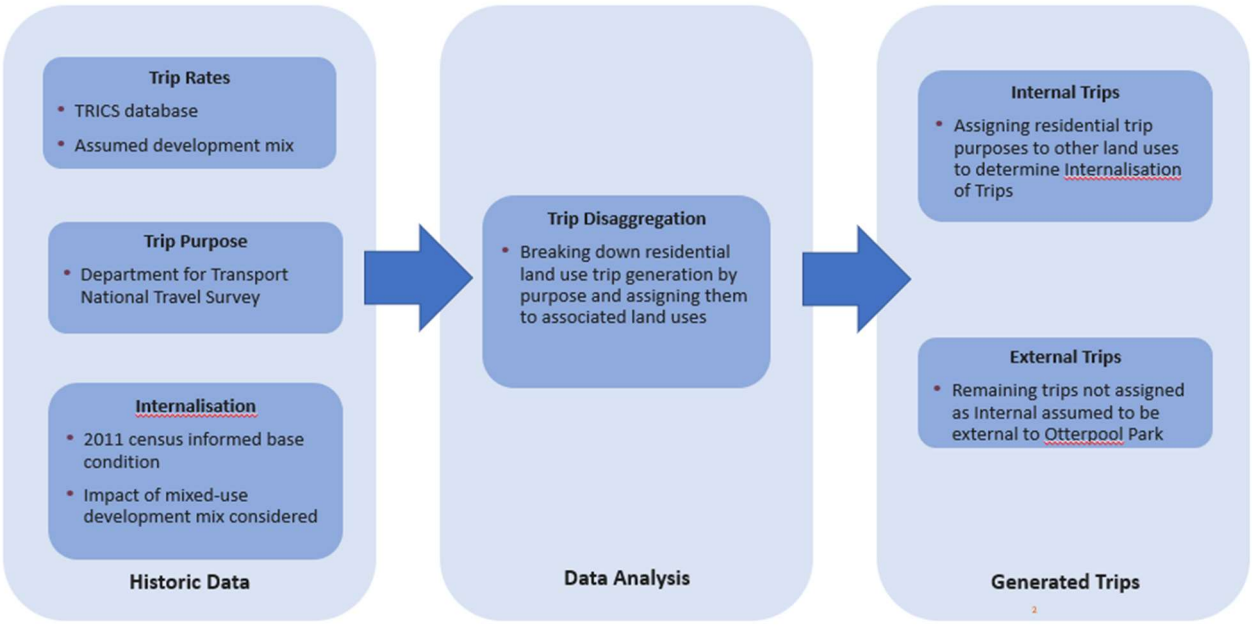


Figure 4: Trip Generation Methodology Summary

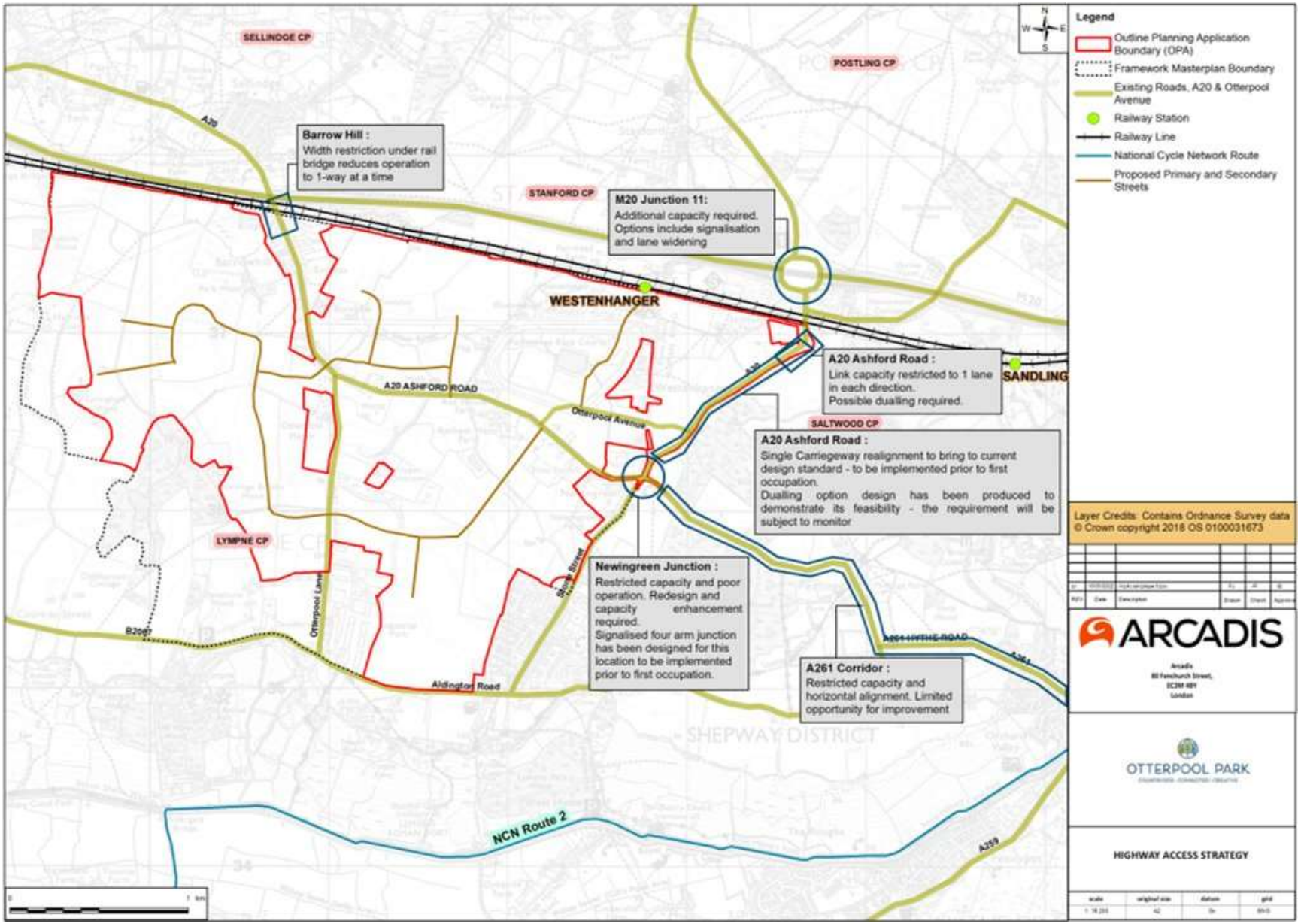


Figure 5: Highway Access Strategy

3.3 Overall Transport Strategy Approach

3.3.1 The TA approach provides a worst-case assessment of the Otterpool development for car trips generated by the site. It has been demonstrated that even with this worst-case car trips that these can be adequately mitigated through key highway improvements.

3.3.2 However, this is not the desired approach and although key highway mitigation options have been identified to accommodate the worst-case car trips, the car trips generated by the site will not reach the levels forecast in the TA, due to the proposed sustainable infrastructure to be implemented as part of the development.

3.3.3 The Otterpool Park development and associated transport strategies will provide residents, employees and visitors with an attractive and comprehensive network of sustainable travel options that will be a feasible alternative to the use of the private car and promote active travel modes.

3.3.4 This will be balanced against the provision of highway access arrangements that are robust enough to sustain traffic movements generated by the site, provide connectivity to existing routes and allow the existing network to function within reasonable limits without causing congestion and accessibility issues for Otterpool Park and existing local residents.

3.3.5 A 'three-tier' approach has been agreed with the planning officers at FHDC for the Otterpool Park planning application and is set out as follows:

- Tier 1: the outline application material itself, setting the overarching design principles for the Garden Town as a whole
- Tier 2: a suite of more detailed masterplans and Design Codes that follow the design principles set out in Tier 1 and provide the 'rules' for guiding the detailed design of individual phases of the development
- Tier 3: Reserved Matters applications for development, including detailed design of buildings, streets and spaces.

3.3.6 The transport supporting documents for the Otterpool Park development and the mechanisms for delivering the mitigation measures are summarised in Figure 6.

3.3.7 The next chapter reports further details on the principles of the Otterpool Park Transport Strategy.

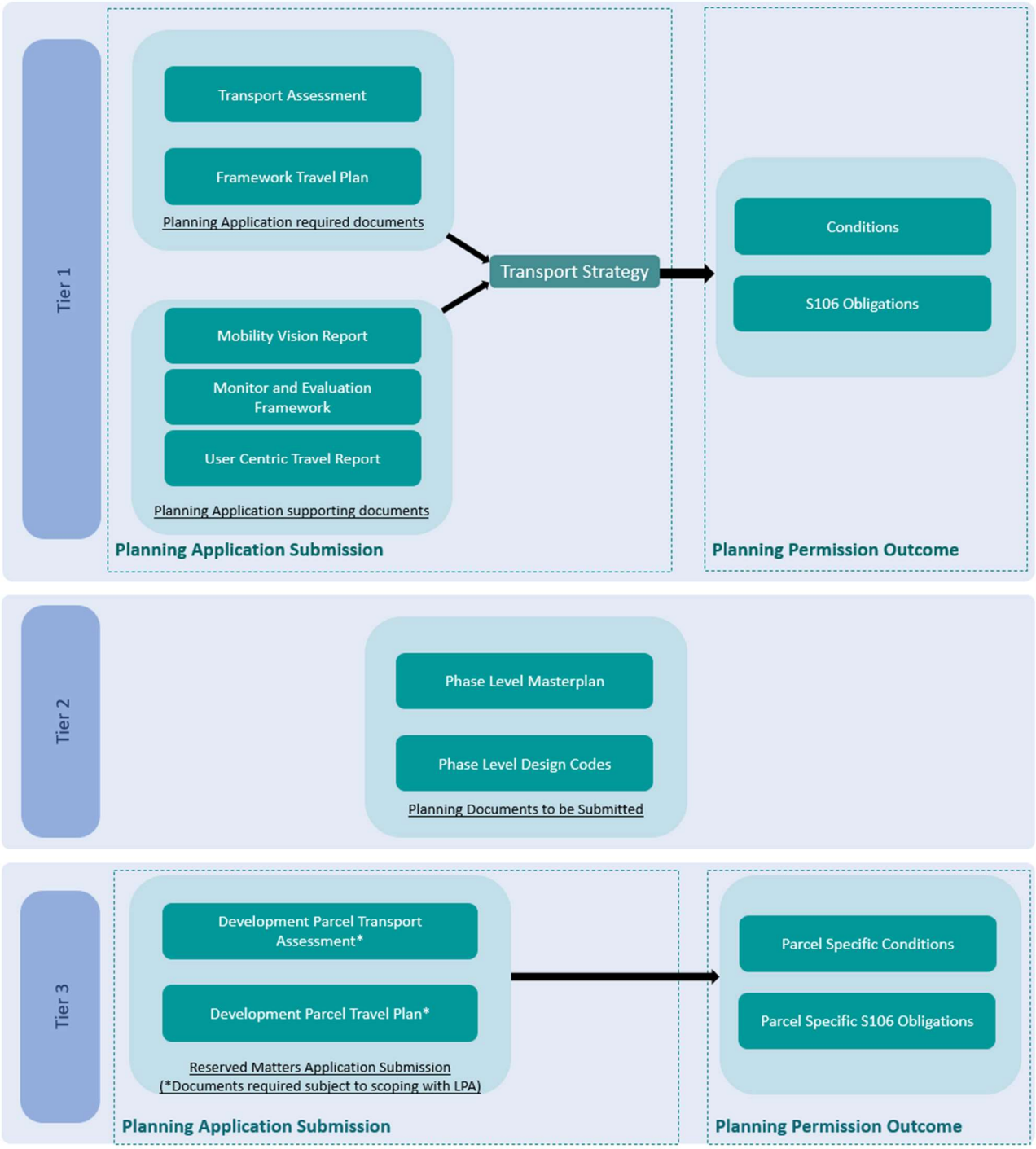


Figure 6: Approach to delivering the Transport Scheme for Otterpool Park

4 Principles of the Transport Strategy

4.1.1 The UK Parliament declared a national climate emergency in May 2019 and became the first major country to legislate for a net-zero target for carbon emissions by 2050. As a result, Government have developed a Ten Point Plan for a Green Industrial Revolution of which Point Five is Green public transport, cycling and walking. The objective is to decarbonise private vehicles and increase the share of journeys taken by public transport, cycling and walking. The Government seeks to accelerate the transition to more active and sustainable transport by investing in rail and bus services, and in measures to help pedestrians and cyclists.

4.1.2 FHDC declared a climate emergency in 2019, and a budget of £10m was set aside for initiatives to help the council hit its net-zero emissions target by 2030. The Local Authority are already encouraging local residents to reduce the carbon footprint by various measures including car-sharing, walk or cycle locally, using public transport where possible and considering alternative ways of travel.

4.1.3 The approach used to estimate future travel modes therefore needs to evolve from the standard "predict and provide" method used in the TA. This is supported by recent guidance documents including *Better planning, better transport, better places (Charted Institution of Highways and Transportation, 2019), On the practical implementation of the decide and provide approach (TRICS, 2021)*. The Department of Transport also published the guidance document *Decarbonising transport: a better, greener Britain* in July 2021 which sets out the government's plans to decarbonise the entire transport system in the UK, one of the aims being that half of all journeys in towns and cities will be cycled or walked by 2030. The principles of the Transport Strategy are set out in this chapter and the proposed mode share targets of the development are presented in Chapter 6.

4.1.4 A monitor and manage approach, secured through the Section 106 agreement, is to be adopted by this development. This framework will be led by the mobility vision for Otterpool Park and will use the feedback from residents and visitors to gauge their experience to track their travel habits and choices. The on-going monitoring of the site will be part of an iterative process to provide real-time service optimisation for users. The principle of this approach is presented in "Monitoring and Evaluation Framework" (WSP) document – submitted for information with the Application. Further details are provided in Chapter 5 Future Mobility.

4.1.5 In accordance with the Point Five of the Ten Point Plan for a Green Industrial Revolution, the infrastructure of the Otterpool Park development will be complemented by bespoke green travel measures. These will build on the opportunities offered by the existing and proposed walking, cycling, equestrian and public transport infrastructure, and promote and develop sustainable travel opportunities as well as support low emissions vehicles and innovative transport solutions.

4.1.6 The Transport Strategy for Otterpool Park is founded on the following principles:

- Create walkable neighbourhoods and a high street highly accessible by walking and cycling.
- Provide strong walking, cycling and bus connections to rail station, employment, high street, local centres and schools from residential areas.
- Provide wider connectivity by walking, cycling and bridleways into surrounding countryside and existing communities.
- Ensure a high level of connectivity to and from Otterpool Park within the sub-region by frequent high-quality public transport.
- Minimise and manage the impacts of traffic on existing road network particularly through existing communities and other sensitive areas.
- Provide appropriate levels of parking for cars and bicycles.

- Implement a range of sustainable travel behavioural measures to encourage use of sustainable modes.
- Provide for future needs for electric vehicles and flexibility to adapt to innovative future mobility solutions.
- Reduce the need to travel by providing relevant on-site facilities.

4.1.7 The overall design of Otterpool Park is focused on the opportunities for excellent sustainable transport provision. A network of routes, infrastructure and green spaces will be created which include both direct and leisure routes, accessible to all from home to work, and play.

4.1.8 The proposed approach at Otterpool Park is to comply with existing policy requirements and respond to emerging policy and technology advances. The trip generation forecast in the TA is a worst-case scenario or vehicle trips. The vision is that the actual car trips generated by the development would not reach the levels estimated in the TA such that the schemes identified in the highway access strategy could be reduced or would no longer be necessary as the threshold of requirement are not met. The monitor and manage approach will assist with identifying when the thresholds are close to being reached so that alternative mitigations can be considered at an early stage to manage the situation in order to delay or prevent the threshold being reached.

4.1.9 The initiatives and interventions proposed are set out below:

- Walking and Cycling Strategy – providing a highly connective and permeable network of routes both within the development and to link to the wider area of existing footpaths and bridleways.
- Bus Service Enhancements – providing high-quality bus infrastructure that will make this travel mode an attractive option for short and longer journeys.
- Rail Enhancements – Improvements to the Westenhanger Rail Station and supporting proposals of future High-Speed services (subject to wider deliverability) at the Station as outlined in Kent's Rail Strategy 2021.
- Shared Mobility Schemes – Provision of bike and scooter share schemes, including electric options. Car club provision will offer development users who do not require a car on a regular basis the option to drive without the high cost and long-term maintenance associated with the private car.
- Mobility Hubs – facilities that integrate shared, active and public transport modes in one location as well as bringing opportunities create attractive places.
- MaaS (Mobility as a Service) - a single digital application to enable users to plan, book and pay for multiple types of mobility, with a single payment channel instead of multiple ticketing and payment operations.
- Healthy Streets Approach – promoting healthy lifestyle through active travel, sustainable choices, safety and connectivity.
- Parking Strategy – achieving an appropriate balance of parking for overall requirements of the development that accommodates parking but does not unduly encourage car ownership and use.
- EV Strategy - a bespoke EV charging point strategy for each phase of the development to be developed to support electric charging network and emerging technology.
- Delivery and Servicing Strategy - consider how to utilise emerging technologies and deliver a sustainable and efficient freight system that is fit for the future.

4.1.10 The vision for the Transport Strategy outcomes will be a substantial improvement to the scenario forecast in the Transport Assessment. The benefits expected when comparing the TA approach to the Transport Strategy principles are summarised in Table 1:

Table 1: Benefits of Transport Strategy Principles

Attribute	Benefits of Transport Strategy Principles
Social	• Community Centres and other Leisure facilities will retain trips within the development, increasing internalisation • Physical, mental health and wellbeing associated with promotion of active lifestyle • Inclusive and equality provided through travel options available
Environmental	• Reduction in car trips, particularly compared to the TA approach means reduction in carbon emissions. • EV Strategy will facilitate the reduction in emissions. • Delivery and Service Strategy will seek to consolidate deliveries and there are options to provide last mile delivery using sustainable modes, resulting in less carbon emissions within the development • Reduced physical highway infrastructure
Economic	• Commercial, retail and business land uses delivered as part of the development will bring employment opportunities for residents • Provision of great transport choice will provide better connectivity to access jobs

5 Future Mobility

5.1 Concept

5.1.1 The future of travel and the movement of goods is changing. With the advances to technology, changes to the way we work and a shift in the way we access services and buy goods are influencing the way we travel. The Otterpool Park development will be able to influence and encourage site users to live and travel in a more sustainable way through the transport options and facilities provided. Additionally, the offer at the development will reduce the need to travel for certain purposes.

5.1.2 The Transport Strategy will be guided by the principles set out in Figure 7, as presented in the "Mobility Vision Report" (WSP) document, also submitted for information with the Application.

Figure 7: Principles of Otterpool Park's Mobility Vision

5.2 User-Centric Approach

5.2.1 Alongside designing the Otterpool Park development to the Mobility Vision Principles, a user-centric approach is to be adopted. This method identifies the likely travel needs of the Otterpool Park resident which then informs how mobility services are designed. This is through undertaking an online survey of 2,600 respondents in London and Kent who meet the demographic characteristics of future residents of Otterpool Park and asking questions relating to their travel behaviours. The consideration for travel behaviours prior to the Covid-19 pandemic, but also recognising the 'new normal' of travel behaviour in the future was made clear to the respondents for each question.

5.2.2 The user-centric approach and process has been summarised in Figure 8 and the details are set out in the User-Centric Travel (WSP) document, also submitted for information with the Application. The surveys undertaken (also set out in the User Centric Travel document) have resulted in the identification of opportunities that key future mobility changes would bring, these are summarised in Table 2.

Table 2: Opportunities that Key Future Mobility changes would bring

Key Change	Survey Result	Opportunities
Changing Attitudes	Respondents expect to travel less post Covid 19 than before the Pandemic	People will be more open to new ways of accessing activities and services.
Cleaner Transport	Over 50% of trips are made using active travel and public transport modes, whilst average car ownership is 70%	Encourage mode shift and offer alternative options to the private car
New Modes	Household bicycle ownership is seen to be low on average (50% of respondents)	Implementation of e-scooter and e-bike schemes for last mile trips
Data and Connectivity	Shopping and personal business trips are the most likely trip purpose to be replaced with a digital alternative	Digital connectivity and the resulting movement of data is the golden thread linking all elements of Future Mobility. This includes the real time alerts of journey disruption provided by smart mobility apps, which can inform users on how best to travel, and whether it is necessary to travel at all.
Automation	More than 50% survey respondents expect no change in their delivery behaviour post Covid 19	Opportunity to implement improved sensing technology, computing power and software engineering to provide more seamless freight and delivery options.
New Business Models	Those living in houses are more than 1.5 times as likely to have at least one car in their household than those living in a flat	Providing new mobility business models, such as on demand transit options, which offer the same level of convenience as a private car but don't have the same high fixed costs.

5.2.3 The outcome of the user-centric approach will lead to a scheme design that will be part of a monitor and manage approach and there will be an on-going iterative process to improve the mobility services at the development from first occupation to post-occupation and beyond. Monitoring would be captured through a combination of methods which could include video capture, with potential for sensors and predictive analytics, travel surveys - through traditional post, online or through a development specific app. The monitoring would not only serve to improve an optimise mobility services but would also serve to inform the Otterpool Park Framework Travel Plan (ES Appendix 16.6) which has objectives to encourage and promote sustainable and active modes of travel.

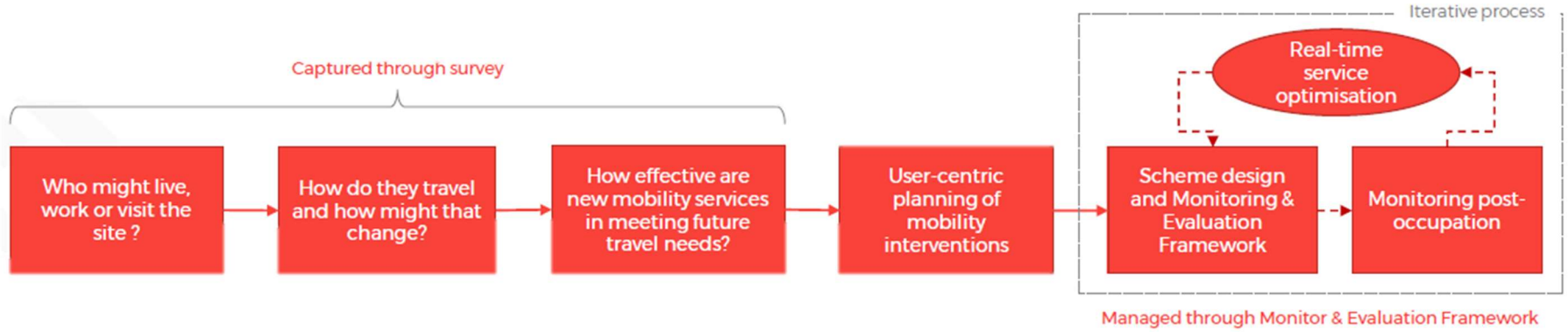


Figure 8: User-Centric Approach

6 Mode Share Targets

6.1.1 The Otterpool Park development will be built in phases until completion in 2042. It is proposed that the intended sustainable habits for the users of the development will be embedded from the outset through the provision of temporary/pop-up Mobility Hubs at the initial stages of development.

6.1.2 Early improvement of bus services and cycle infrastructure would support increased mode share by bus and cycle for the build out of the first phase of Otterpool Park compared to the baseline for the area. Over the medium to longer term, continued development of the active travel network and growth in use of rail services would also be anticipated, contributing to increased sustainable mode share.

6.1.3 The target with the development fully built represents a significant increase in sustainable travel and would present a step change in comparison to the base situation. The targets are for all trips and thus it relies on a balance of land uses, with work journeys creating more car mode share and education and local services trips having a higher proportion by active modes such as walking and cycling.

6.1.4 Ambitious mode share targets for total car trips, both internal and external are proposed due to the expected offer and uptake of the sustainable modes. These services are to be regularly monitored and optimised as part of an iterative process. This approach is described in Chapter 5 Future Mobility.

6.1.5 Two scenarios have been derived based on the results of the survey data:

- Best Case (Phase 1) Scenario: This scenario takes the user survey results a step further by applying a more ambitious mode share target than the User Survey scenario. The comprehensive range of transport measures proposed at the development would be required to support the ambitious mode share target. This target is intended for Phase 1 of the development, where accessibility levels are expected to be highest with Westenhanger rail station being within this plot, however, it could also be used as an aspiration for the wider site. The mode share for this scenario has originated from WSP's "Otterpool Park – Phase 1 Access and Movement Strategy" with some minor amendments.
- User Survey Scenario: Directly based on the likely travel behaviour of future Otterpool Park users based on survey responses and are only applied to the external trip Mode Share, the internal trips reflect those in the Best Case scenario.

6.1.6 Behaviour change of Otterpool Park users is expected to achieve the mode share targets, where the Best Case scenario provides a more ambitious aspiration. The internal and external trips mode share targets for the TA, Best Case and User Survey scenarios are presented in Table 3, Table 4 and Table 5 respectively. The shift to active modes of travel would be facilitated by the proposed transport infrastructure being implemented as part of the development.

6.1.7 Table 6 summarises the differences between the driver trips for each of the scenarios. The reduction in driver trips for the user survey and best case scenario could be up to 35% and 47% in the PM peak hour compared to the TA worst case. This demonstrates that there may not be a need for some of the mitigation measures proposed as part of the TA as the thresholds for their requirement may not be reached.

Table 3: Internal, External and Combined AM and PM Peak Mode Splits (2044) – Transport Assessment Scenario

Period	Mode Split					
	Internal Trip		External Trips		Combined	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
Driver	10%	16%	67%	69%	46%	51%
Passenger	3%	7%	12%	16%	9%	13%
Taxi	0%	0%	0%	0%	0%	0%
Motorcycle	0%	0%	1%	1%	1%	1%
Train	0%	0%	3%	3%	2%	2%
Bus	3%	3%	6%	5%	5%	4%
Light Rail	0%	0%	0%	0%	0%	0%
Bicycle	5%	5%	2%	2%	3%	3%
Walk	79%	68%	8%	5%	34%	26%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Table 4: Internal, External and Combined AM and PM Peak Mode Splits (2044) – Best Case Scenario

Period	Mode Split					
	Internal Trip		External Trips		Combined	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
Driver	8%	15%	21%	25%	16%	22%
Passenger	3%	7%	5%	8%	4%	8%
Taxi	2%	5%	0%	0%	1%	2%
Motorcycle	0%	0%	0%	0%	0%	0%
Train	0%	0%	41%	40%	26%	26%
Bus	5%	5%	16%	13%	12%	10%
Light Rail	0%	0%	0%	0%	0%	0%
Bicycle	7%	11%	7%	7%	7%	8%
Walk	75%	58%	10%	7%	34%	24%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Table 5: Internal, External and Combined AM and PM Peak Mode Splits (2044) – User Survey Scenario

Period	Mode Split					
	Internal Trip		External Trips		Combined	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
Driver	8%	15%	31%	36%	23%	29%
Passenger	3%	7%	6%	11%	5%	10%
Taxi	2%	5%	1%	1%	1%	2%
Motorcycle	0%	0%	1%	1%	1%	1%
Train	0%	0%	28%	24%	18%	16%
Bus	5%	5%	14%	11%	11%	9%
Light Rail	0%	0%	0%	0%	0%	0%
Bicycle	7%	11%	3%	3%	5%	6%
Walk	75%	58%	15%	12%	37%	28%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Table 6: 2 Way Driver Trips Summary by Scenario (2044)

Period	Scenario					
	Worst Case (TA)		User Survey		Best Case	
	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
Driver Mode Share	46%	51%	23%	29%	16%	22%
Driver Trips	3,923	3,649	1,948	2,077	1,404	1,558
Trip Difference compared to Worst Case (TA)	-	-	-1,975	-1,572	-2,519	-2,091
% Reduction compared to Worst Case (TA)	-	-	50%	43%	64%	57%

7 Accessibility and Mobility Integration

7.1.1 A comprehensive range of measures are proposed for the development to promote sustainable travel and vehicle choices, in addition to the provision of infrastructure in the form of walking and cycling routes and bus services and cycle storage. It is intended that these will all contribute towards the increased uptake of sustainable and active travel modes to achieve the ambitious target mode shares set out in Chapter 6. The suggested measures that this Chapter presents are listed below:

- Walking and Cycling Strategy
- Bus Service Enhancements
- Rail Enhancements
- Shared Mobility Schemes
- Mobility Hubs
- MaaS.

7.1.2 Of these measures, off-site initiatives are subject to ongoing negotiations with the planning and highway authorities and relevant transport operators to be secured through Section 106 contributions.

7.2 Walking and Cycling Strategy

7.2.1 The Walking and Cycling Strategy will create a highly connective and permeable network of routes that support the anticipated high-demand from the resident and working Otterpool Park population, whilst, also bringing benefits to the existing populations in adjacent settlements and leisure users of existing footpaths and bridleways.

7.2.2 To ensure cycle and walking routes are well used and fit for purpose, there are ‘direct routes’ that act as commuting routes to allow direct and fast access between residential areas and the station, town centre, key local employment areas, local centres and schools. These will be a mix of routes that are adjacent to the road network and off-road connections where they are more direct. There will also be a network of ‘leisure routes’ introduced, consisting of longer, meandering paths which will connect the green spaces and Otterpool Park to the wider countryside.

Inner-site connection

7.2.3 Where walking and cycling routes share the highway corridor, the following provision will be made:

- Strategic streets will have segregated pedestrian and cycle lanes with good north-south crossing points.
- Primary streets will have segregated pedestrian and cycle lanes.
- Secondary streets will demarcate cycle lanes within the road carriageway.
- In tertiary and other streets, there will have a footpath on one side and wide verges and cyclists will share the roadway with vehicles.
- Where walking and cycling routes intersect with vehicular traffic routes, junctions will be designed to afford priority to non-motorised users.
- A series of walking and cycling routes away from vehicular traffic will also be created, establishing a safe network linking the high street and local centres to and through the residential areas.
- There will be a number of locations where key walking and cycling links will connect across the A20 between the northern and southern parts of the development.

- All walking and cycling routes will be of a high-quality with all-weather surfacing, well-lit and easily maintained, taking into account environmental considerations.
- Routes will be through green spaces, along the river corridor, or on well-designed streets to make them a more attractive option and more direct than using the car.

Off-site connection

7.2.4 The Walking and Cycling Strategy will improve connectivity between Otterpool Park and the wider network. The priorities for improvement proposed that would benefit the future users of the Otterpool Park development have been identified as follows:

- HE359 and HE371 footpath - Improve the connection to Public Right of Way (PRoW) and cycle network from Westenhanger Station to the north.
- HE281 footpath - Improvements to the route between Stone Street and heading south east through Sandling Park towards Hythe and Saltwood.
- HE293 footpath – links to the proposed pedestrian network and connects eastwards to Hythe.
- HE343 byway – Improving this link will make it more attractive as a pedestrian route to Hythe.
- Aldington Road between Otterpool Avenue and Stone Street – improvements to the pedestrian provision such as formalised crossing points and consideration for traffic calming measures close to key pedestrian desire lines.
- Harringe Lane - proposal to close this road for vehicle traffic halfway down the road. This will prevent any through traffic generated by the development and create a more attractive route for walking and cycling in the north – south direction.

7.2.5 These routes are intended to be provided primarily as leisure routes, although a small number of users may consider these as a commuting route.

7.2.6 The nature of the improvements is part of an ongoing dialogue and connections will be supported through the likely provision of contributions to off-site sustainable transport improvements. However, this will be secured and detailed within the supporting Section 106 legal agreement following planning submission. The proposed walking and cycling routes through the development and also connecting to the wider surrounding area are shown in Figure 9.

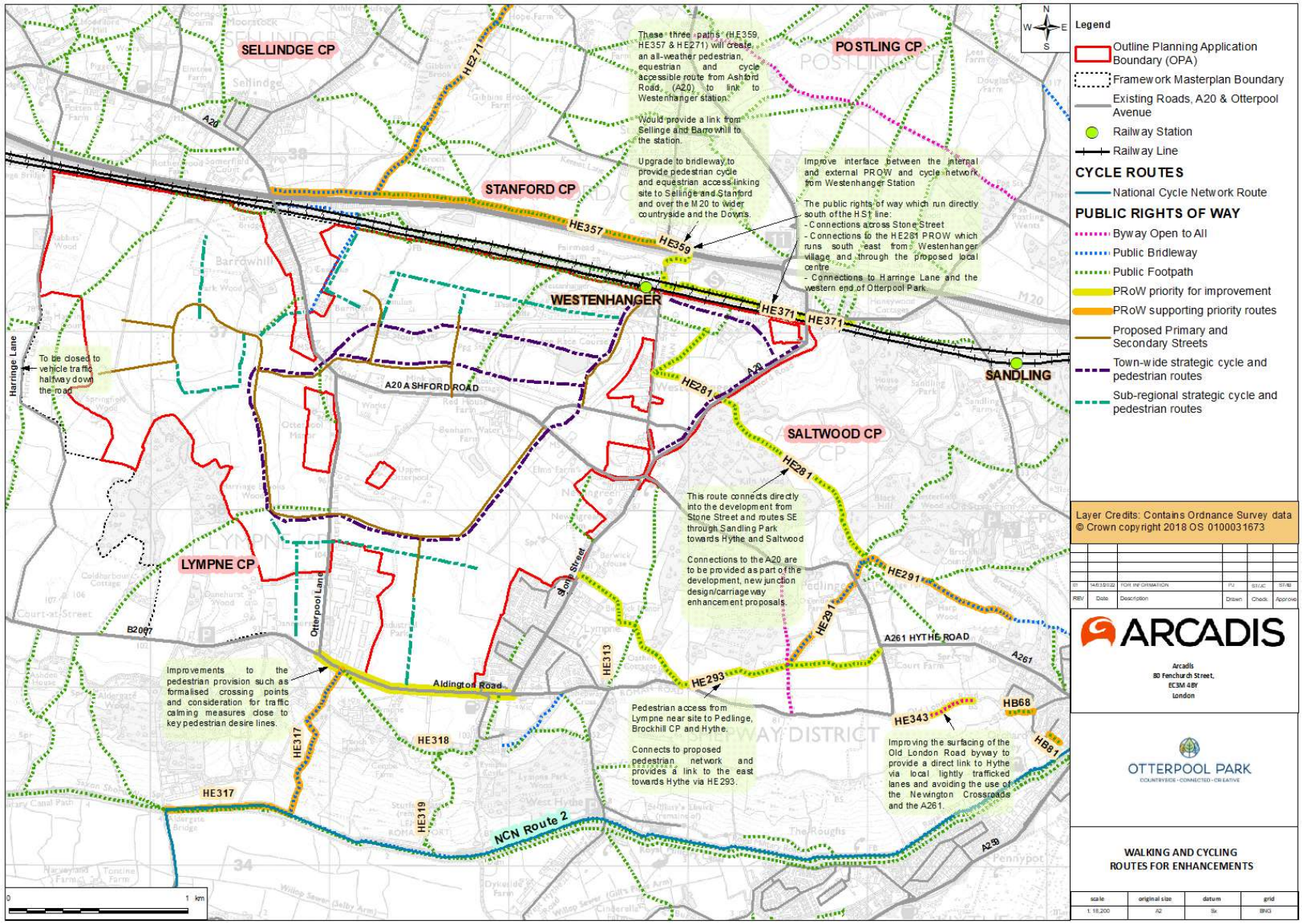


Figure 9: Walking and Cycling Strategy Map

7.3 Walkable Neighbourhood

7.3.1 Walkable neighbourhoods create the opportunity for containing trips within the site and for achieving high levels of walking and cycling usage.

7.3.2 The Chartered Institution of Highways and Transportation's 'Guidelines for Providing for Journeys on Foot' provides a rank of acceptable walking distances for pedestrians without a mobility impairment for some common amenities is shown in Table 7.

Table 7: Acceptable Walking Distances for Pedestrians

Distance	Town centres	Commuting	Elsewhere
Desirable	200 m	500 m	400 m
Acceptable	400 m	1,000 m	800 m
Preferred Maximum	800 m	2,000 m	1,200 m

7.3.3 Based on the average walking speed, a 10-minute walk is approximately a 1 kilometre. The design of the Otterpool Park development is based on the 10-minute town concept, where residents can live locally, with most of all homes within easy walking or cycling distances of facilities and services.

7.3.4 The design of the development provides for all homes to be within 1 kilometre distance from facilities and services. The proposals are for the follow distances:

- 400 metres of a LEAP (local play area)
- 700 metres of a MUGA (multi use games area)
- 800 metres of a primary school and local centre
- 1,000 metres of allotments and community orchards, sports pitches and a NEAP (neighbourhood play area)

7.3.5 The connectivity for leisure facilities, local centres and schools by walking are shown in Figure 10, Figure 11 and Figure 12 respectively. The isochrones do not consider the land relief and hence is indicative only of the likely distances reached in the journey times.

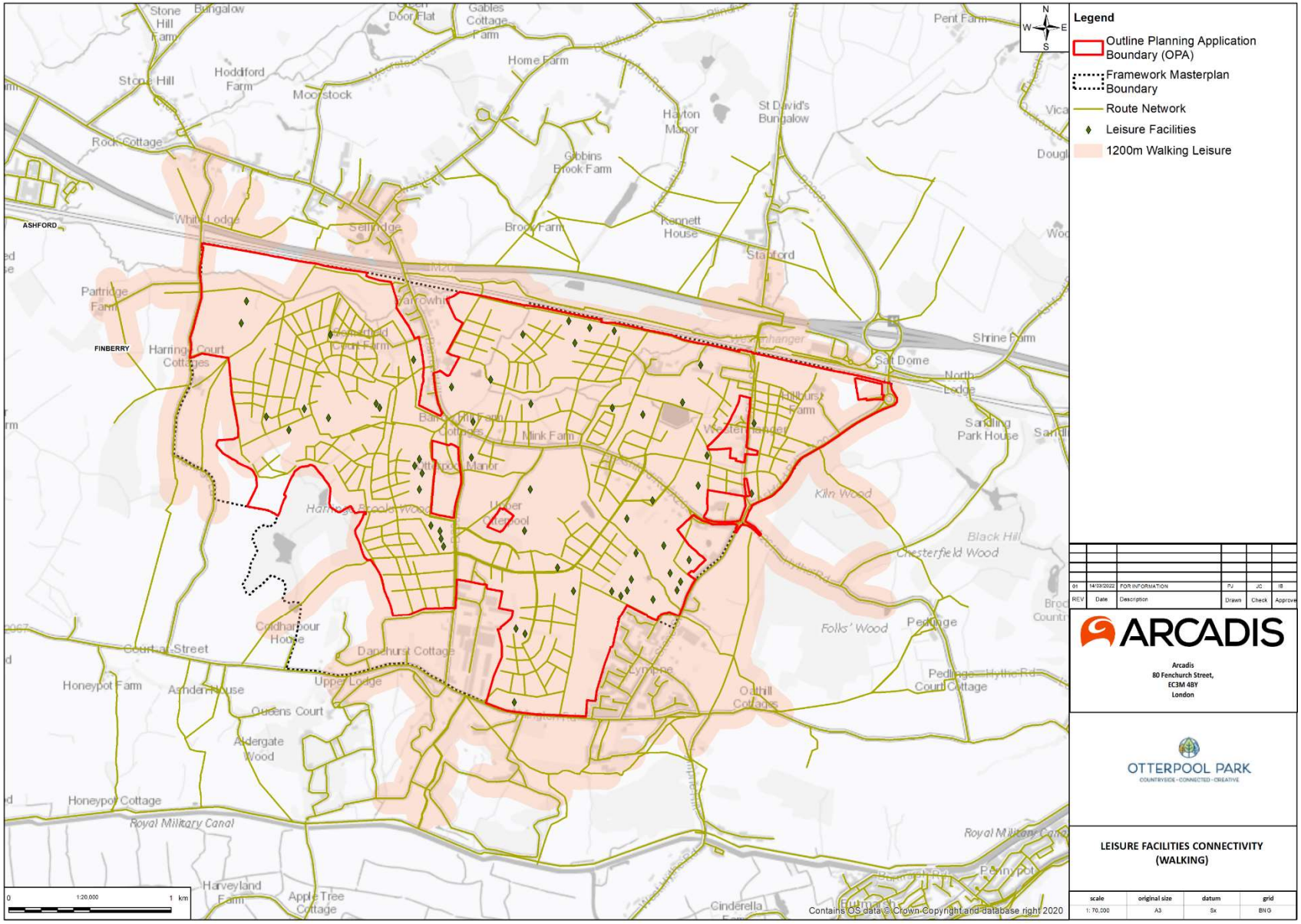


Figure 10*: Leisure Facilities Connectivity (Walking)*

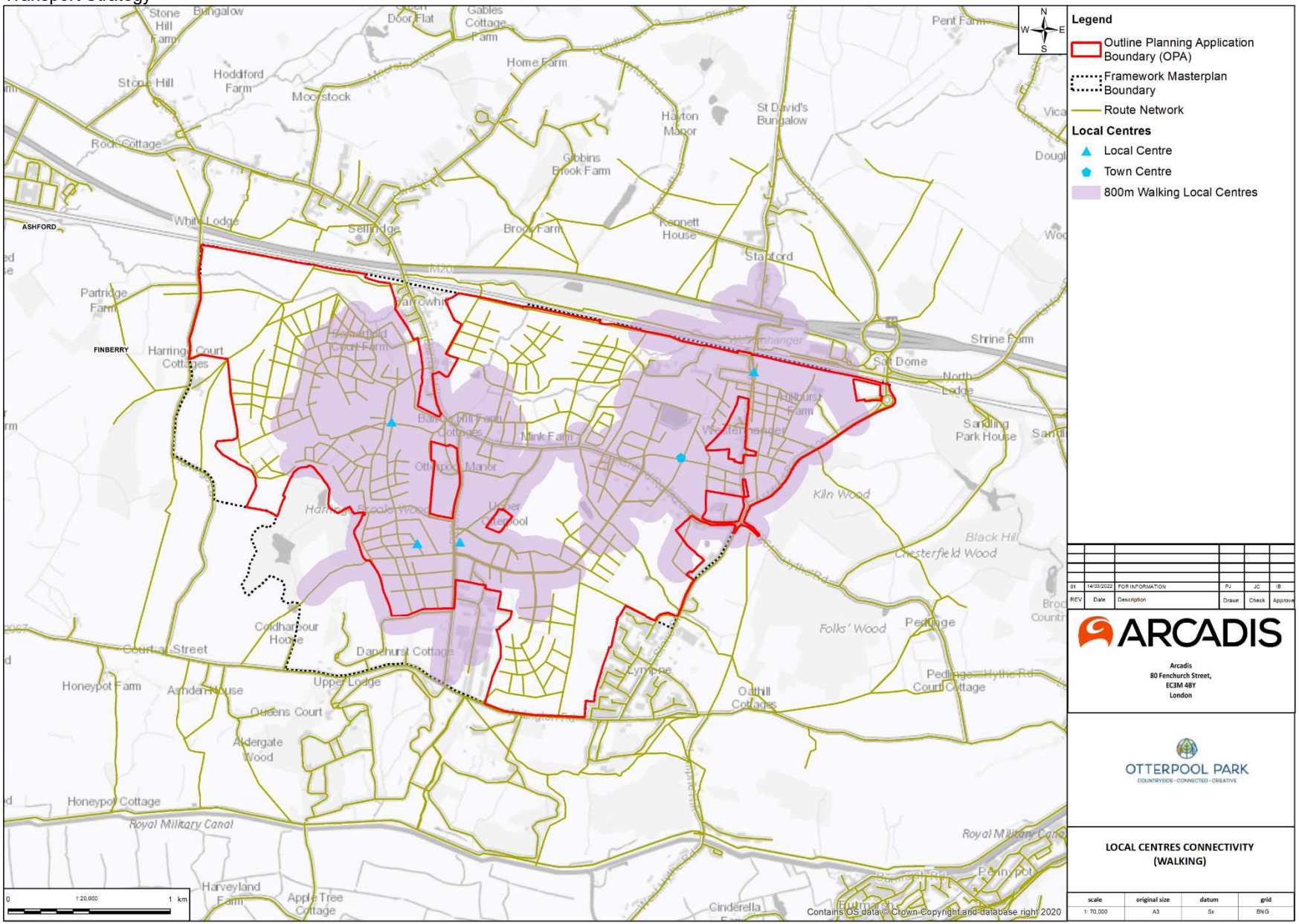


Figure 11: Local Centres Connectivity (Walking)

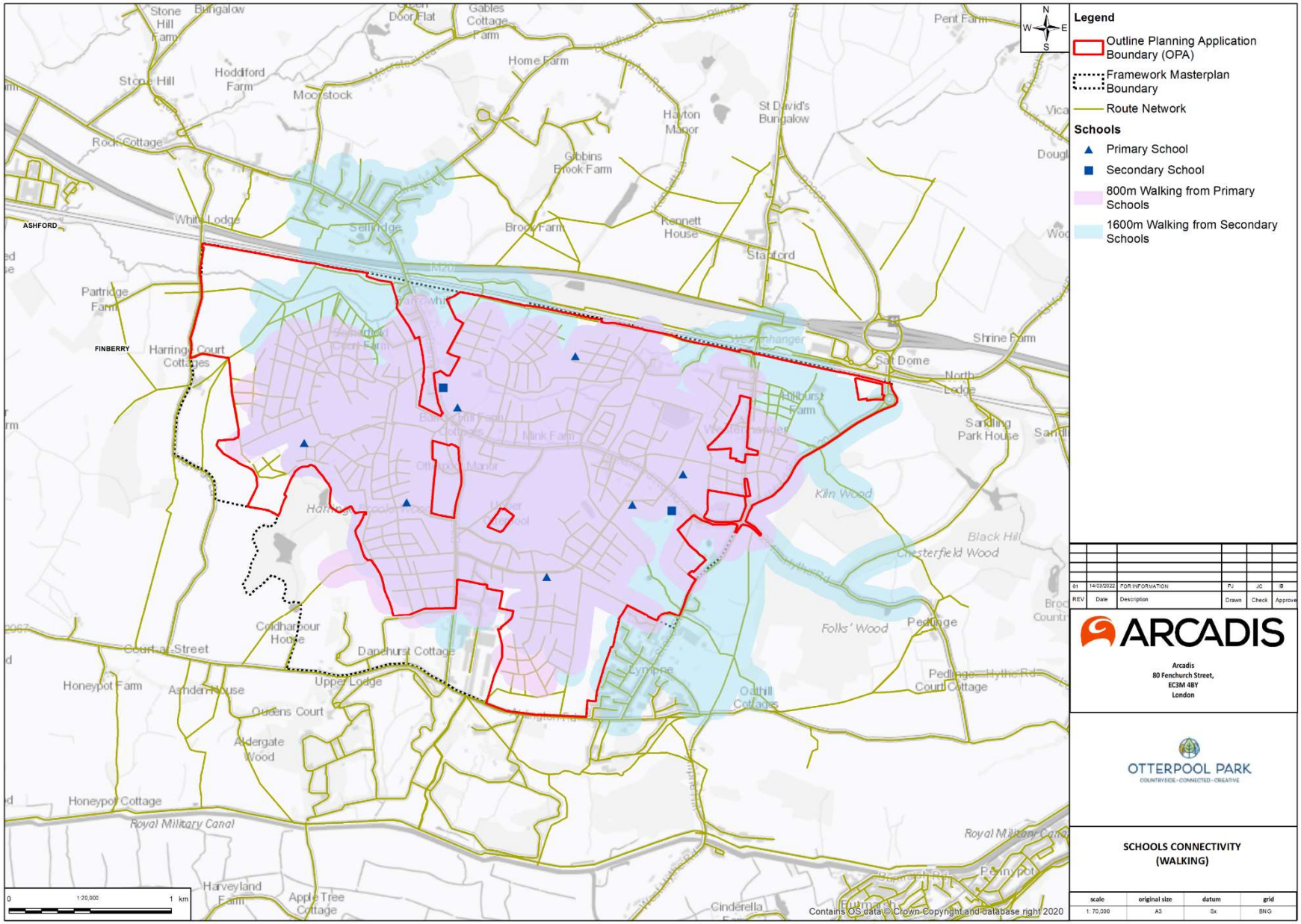


Figure 12: Schools Connectivity (Walking)

7.4 Cycle Streets

7.4.1 The Cycle network will be designed to create a safe environment for all types of cyclists to move freely and independently on all routes.

7.4.2 The LTN 1/20 Cycle Infrastructure Design document (DfT 2020) suggests that in a built-up area, the spacing of routes should typically be 250m – 400m, but this will decrease in outer suburbs where the density of development is lower.

7.4.3 It is intended that a 250-metre mesh for cycling networks will be provided throughout the development. This will comprise of a grid of paths and streets where surfacing, directness, legibility, and junction design are optimised for safe and efficient active travel.

7.4.4 As part of the Cycle infrastructure and facilities provided at Otterpool Park, cycle hubs will be implemented at appropriate locations to be agreed at Reserved Matters Application stage. The cycle hubs would include, cycle stands, cycle storages, shops and services, depending on the requirement of the area. These will be integrated with Mobility hubs at key locations to be agreed as part of Reserved Matters Application stage.

7.4.5 The cycle routes within the development and in the wider vicinity are shown in Figure 13 and Figure 14. The connectivity for leisure facilities, local centres and schools by cycling are shown in Figure 15, Figure 16 and Figure 17 respectively. The cycle speed of 5m/s has been assumed for these isochrones, this is deemed a leisurely pace, the equivalent journey time and distances considered are summarised in Table 8. The isochrones do not consider the land relief and hence is indicative only of the likely distances reached in the journey times.

Table 8: Cycle Distances and Journey Times Considered for Different Trip Purposes

Trip Purpose	Cycle Distance	Journey Time
Leisure Facilities	4500 m	15 mins
Town and Local Centres	3000 m	10 mins
Primary Schools	3000 m	10 mins
Secondary School	6000 m	20 mins

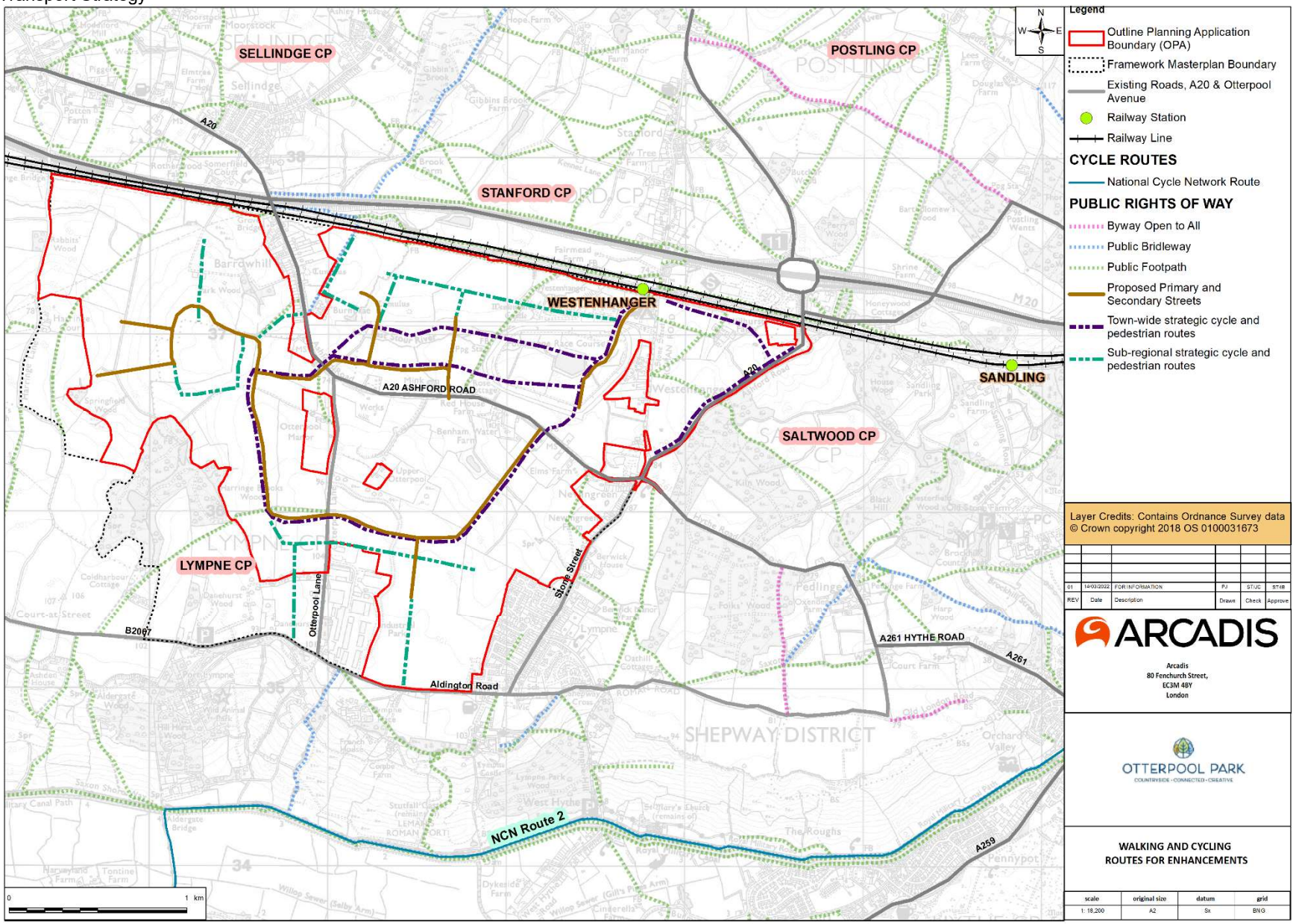


Figure 13: Otterpool Park Masterplan Cycle Routes

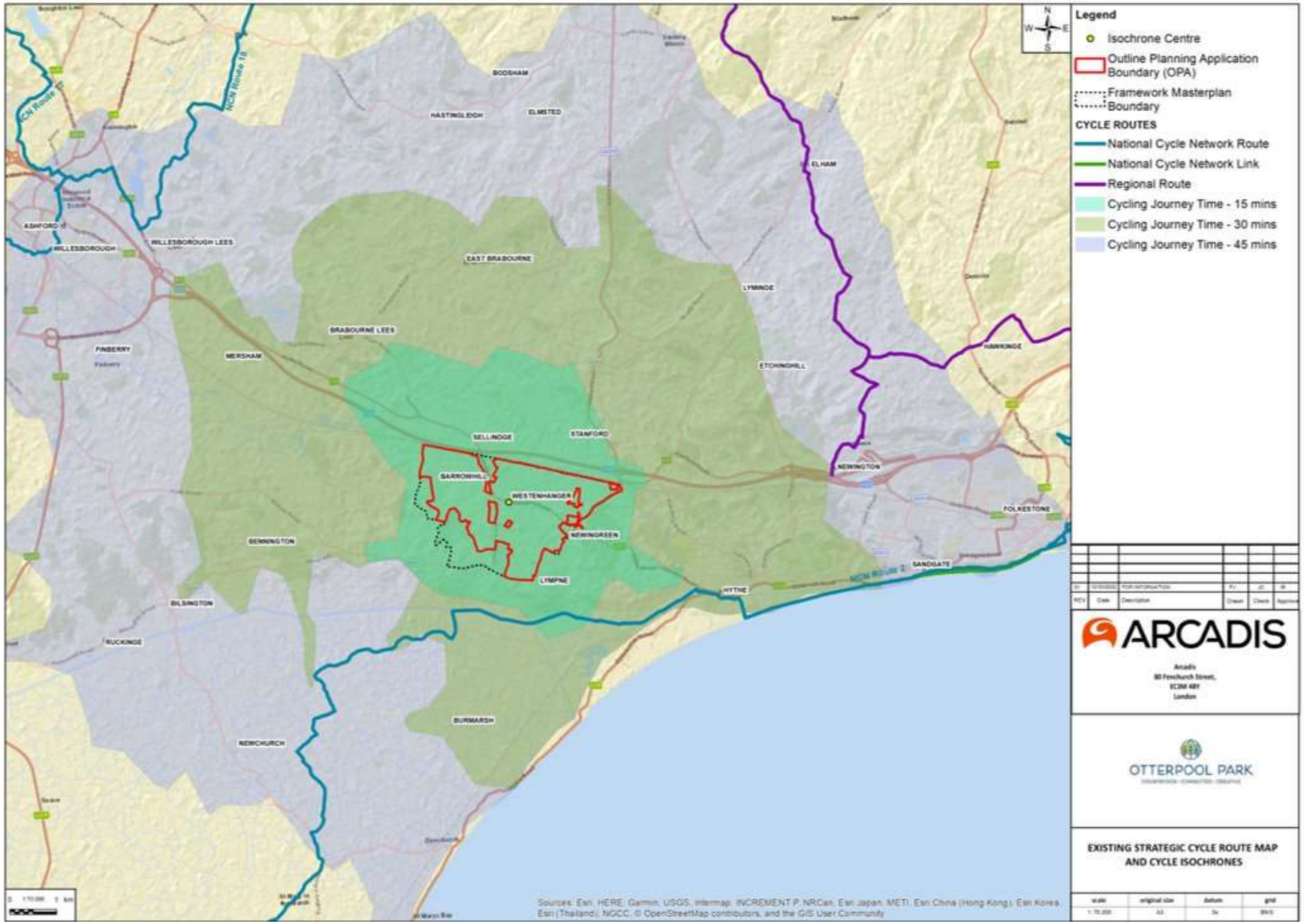


Figure 14: Wider Cycle Routes Connectivity

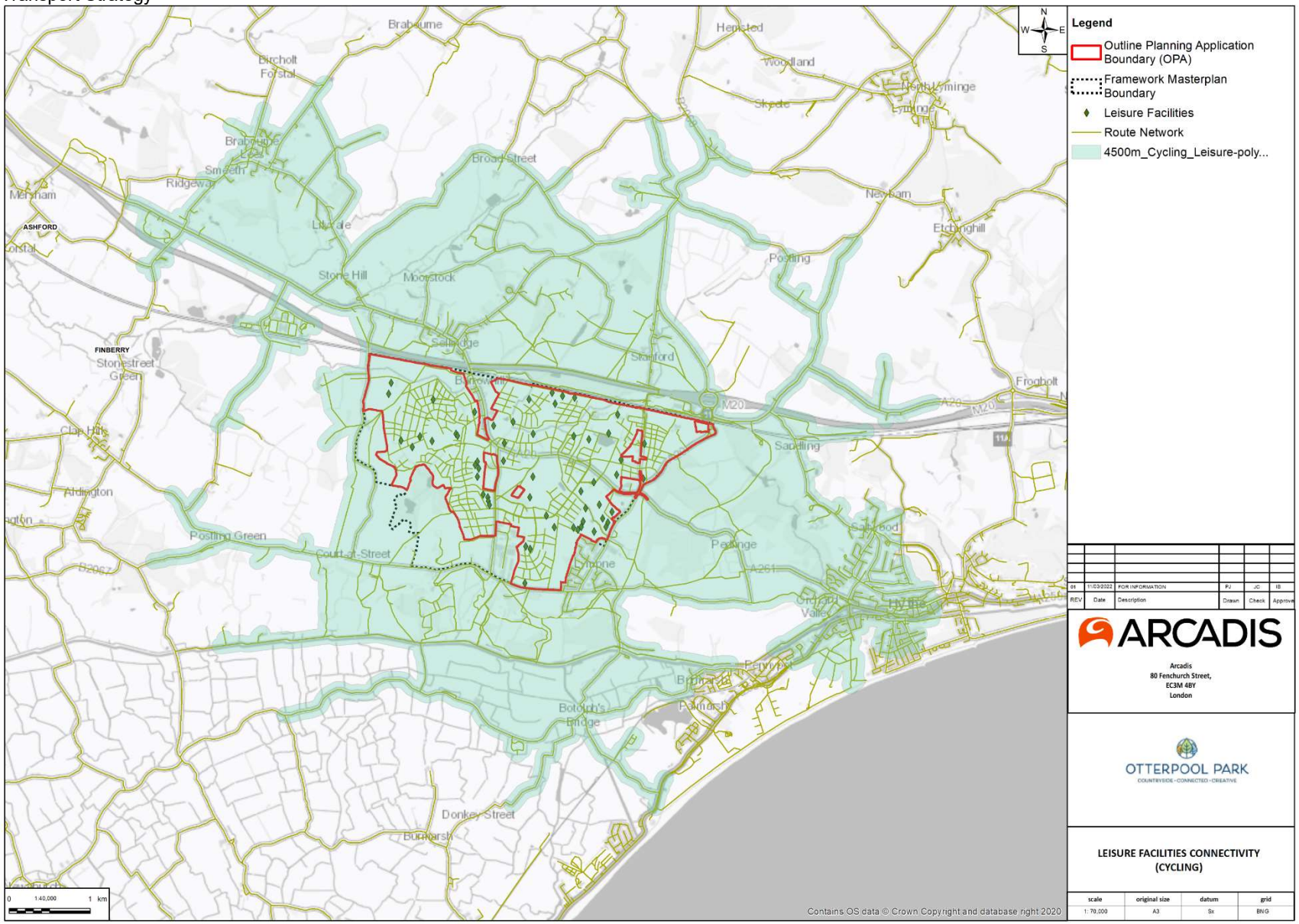


Figure 15: Leisure Facilities Connectivity (Cycling)

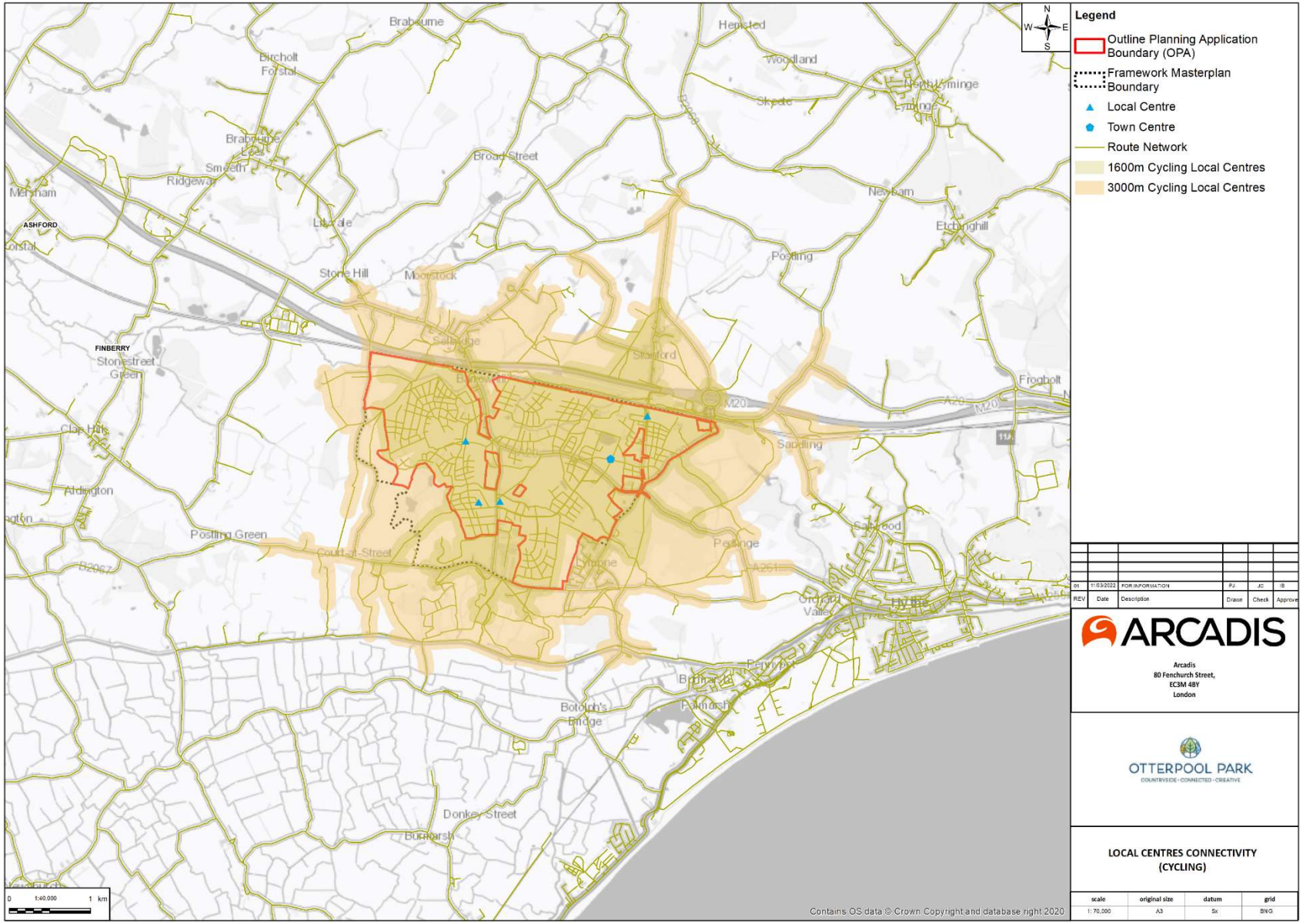


Figure 16: Local Centres Connectivity (Cycling)

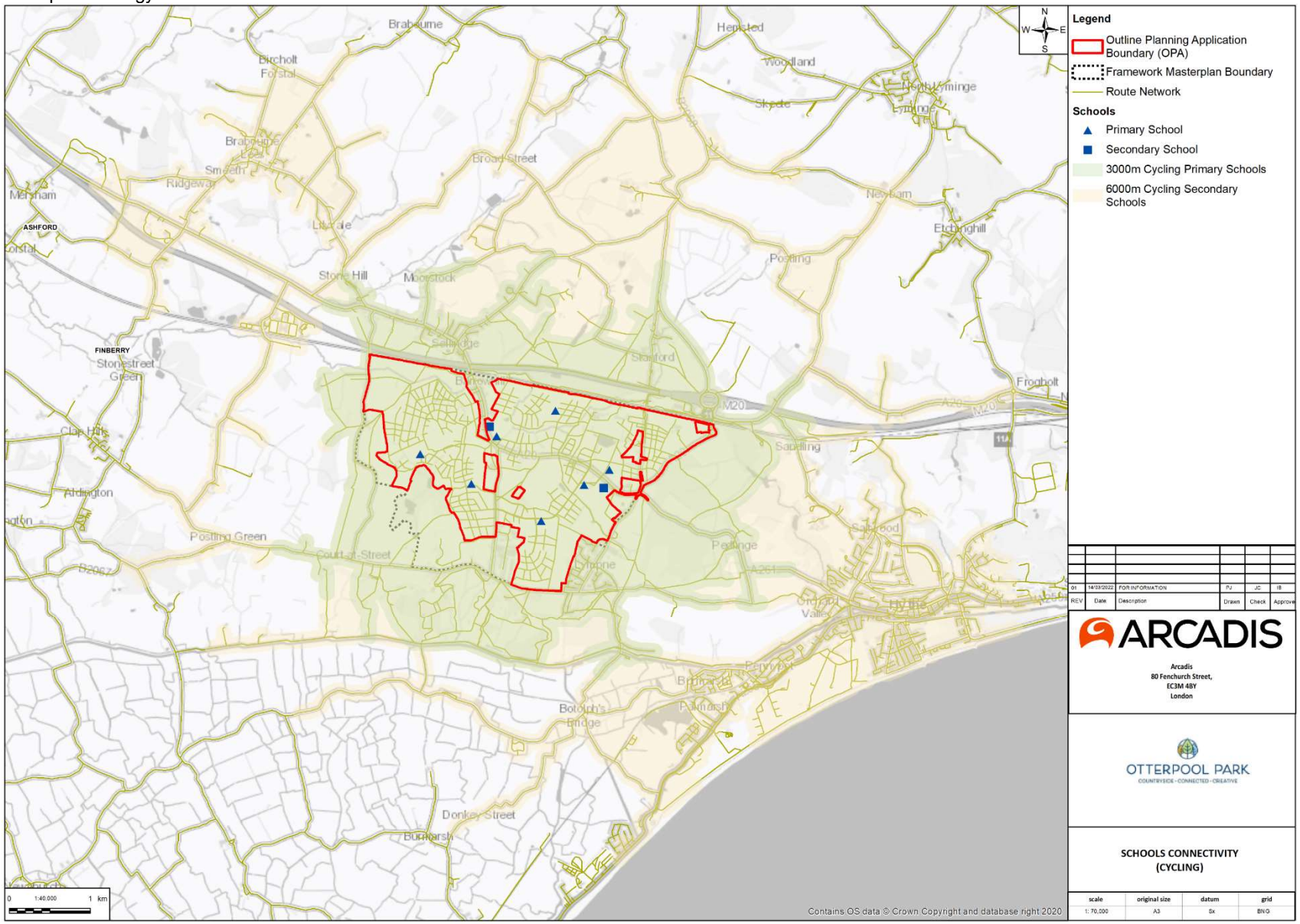


Figure 17: Schools Connectivity (Cycling)

7.5 Bus Provision

Bus Network

7.5.1 High quality bus stop facilities will be provided to make the services an attractive option for short and long journeys, with shelters, lighting and real time information. Infrastructure design will take account of the accessibility needs of the mobility impaired. Real time information on bus services would be available via bus stops or other appropriate technology for users.

7.5.2 It is likely that bus services would be delivered by the bus operator and monitored by the Quality Bus Partnership (QBP) between Folkestone & Hythe District Council, Kent County Council and the bus operator, to achieve quality local bus services. The aim of a QBP is to develop and improve all aspects of bus travel within the District, including infrastructure, with the overall objective of increasing passenger numbers, thereby reducing the need to travel by car.

7.5.3 The measures that the QBP would consider for the Route 10, which will pass through the Otterpool site, might include route diversion, investment in new vehicles, with consideration of hybrid or electric buses, as well as fare incentives and new infrastructure on the route, such as, enhancements to existing bus stops and the provision of new high-quality facilities. However, at present discussions are ongoing as to the delivery of bus services for the development and various means of provision will be considered including use of demand responsive services in the early years.

Bus Service Strategy

7.5.4 The bus services strategy is to provide an accessible, frequent and reliable service for residents to connect within the site to key destinations including local centres, schools, employment sites and Westenhanger Station and to key destinations, notably Ashford, Hythe and Folkestone.

7.5.5 Contributions to bus services will be made to enable provision at 30-minute frequencies from early occupation. By the time of full development, it is envisaged that there would be an increase to between 4 and 6 buses per hour. Most important is the change to existing bus routing to reach all areas of the site, which could be achieved in a number of ways, through diversion of existing services or the provision of new services that route externally or just internally. The aim is for people to be able to turn up and catch a bus with no more than a typical 5-to-7-minute wait.

7.5.6 Bus services would be likely to firstly involve an enhancement to the existing services on the A20, with additional buses being added to increase frequencies and provide a bus service through the development on the north and south side of the A20.

7.5.7 Bus service provision for Otterpool Park is likely to be a mix of diversion of existing services and new, dedicated services within the site, with some links to Sellindge and Lympne locally and to Ashford, Hythe and Folkestone further afield.

7.5.8 It is proposed that the service 10/10A will evolve to serve various parts of site as it's built out and occupied; then new bespoke service(s) to complete gaps.

7.5.9 It is proposed that the bus routes will be kept within primary roads including the A20 which will be appropriate for use by buses and in accordance with highways design and specifications provided by Stagecoach.

7.5.10 It is intended that there would be a bus stop within 400 metres of most homes to provide a balance between maximising dwellings within the walking catchment whilst avoiding

unnecessary stopping along a route. The proposed bus network would be flexible to align to phases that come forward over the lifetime of the development is shown in Figure 18.

Figure 18: Proposed Otterpool Bus Network

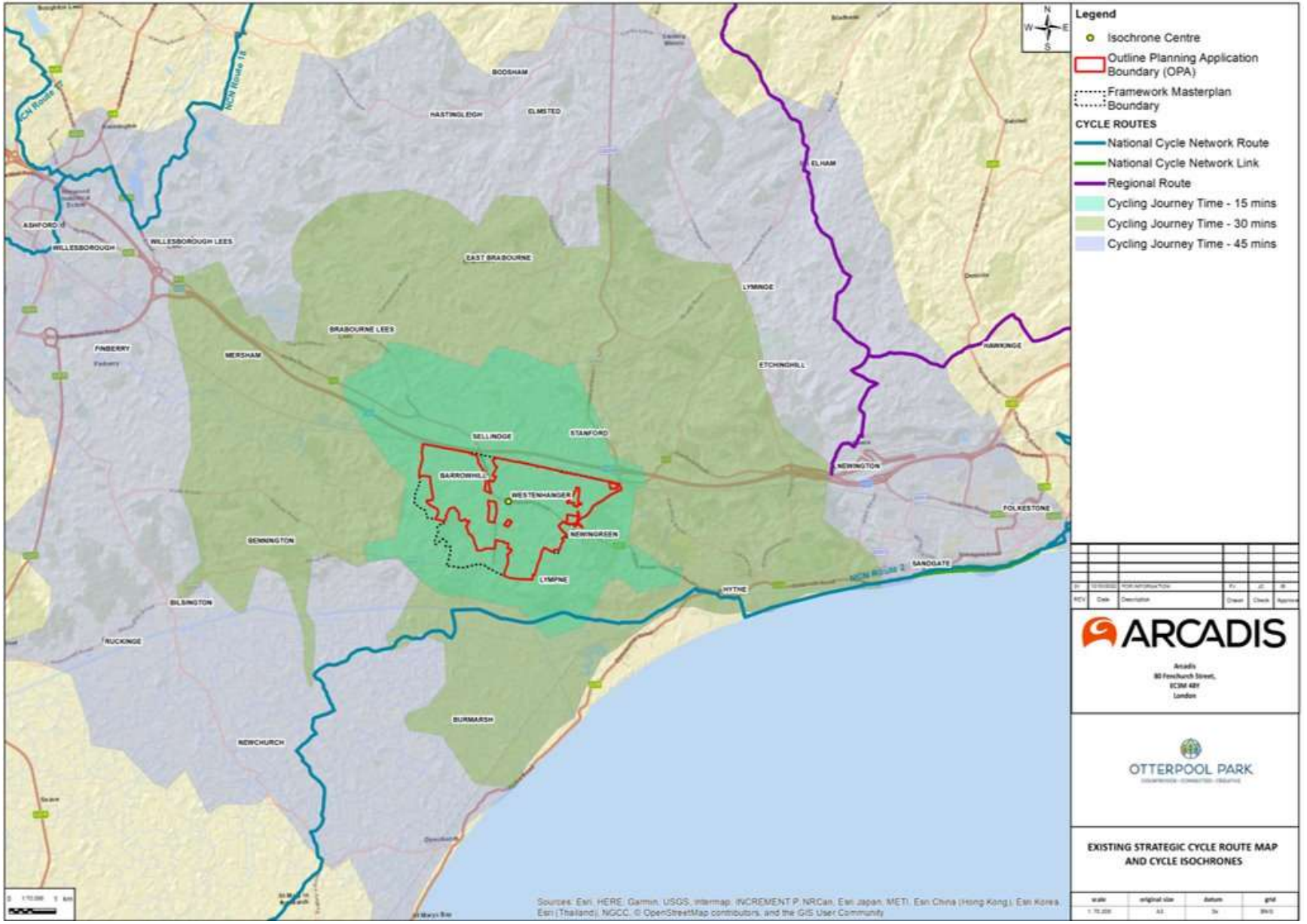


Figure 19: Existing Bus Network and Services (Wider Area)

Demand Responsive Service (DRT)

7.5.11 DRT is a shared service the same as other public transport provision and operates like a taxi but charges close to normal bus fares. It allows travel within designated rural areas or between areas, joining together major public transport arteries.

7.5.12 Should such a service be implemented, residents of Otterpool Park will be able to book and track the bus, pre-pay and reserve a space for a pram or wheelchair within an app, which then optimises the best route for the driver to take for all passengers.

7.6 Rail Provision

Rail Service Enhancement

7.6.1 The potential to enhance rail services with additional direct services to London is being explored with the aspiration of at least hourly direct services of less than 60 minutes journey time. Kent's Rail Strategy 2021 includes High Speed service at Westenhanger Station to meet the increased demand which will arise from the Otterpool Park Development.

7.6.2 The Department for Transport (DfT) determines the Train Service Requirement (TSR) for each of the Direct Awards (DA) granted to each train operator such as Southeastern. The next DA is due to commence in October 2021 and will last for between two and six years, so it could be 2027 before the next commercially competition Passenger Service Contract (PSC) is tendered and awarded.

7.6.3 It is therefore important that the Otterpool Park LLP obtains DfT agreement on the principle of High Speed (HS) service provision at Westenhanger from a given point (yet to be determined) within the operating period of the next DA to Southeastern. With this objective, the lead officers from Otterpool Park LLP have already engaged with the lead civil servants the DfT who are responsible for the TSR for the next DA, with the aim of securing a commitment for HS services at Westenhanger.

7.6.4 Given the timetable constraints of the existing ‘rounder’ HS services (which operate from St Pancras to St Pancras around the Kent coast in both directions during the off-peak periods), Otterpool Park LLP plans to obtain approval for a two-stage approach:

- An initial HS service in the peak periods, in both directions in each peak, in which all HS peak services which currently pass would call at Westenhanger, giving 2 trains per hour (tph) in the AM peak up and in the PM peak down, with 1tph in the contra-peak directions in each peak period.
- An eventual all-day HS service, following a future re-working of the whole HS service timetable in Kent, which would enable all HS services which currently pass to call at Westenhanger. This would deliver 1tph throughout the off-peak periods on Monday to Friday, and all day on Saturdays and Sundays.

7.6.5 The Mainline (Charing Cross / Cannon Street (peaks) to Dover Priory / Ramsgate) service would continue as now, with all trains which are routed via Westenhanger calling there. This service would continue to operate as 2tph in the peaks and 1tph in the off-peaks, contributing to a high level of overall service provision for passengers travelling between OP and Ashford, Folkestone and Dover.

7.6.6 The overall service levels, if these ambitions are realised, would provide Otterpool Park with an excellent HS and Mainline rail service, enabling commuters and leisure travellers to reach London St Pancras in about 50 minutes without any change of train, and continuing to provide good local access to adjacent towns and centres of employment and further education.

7.6.7 The train planning analysis and economic performance analysis, which will be undertaken by Network Rail and Southeastern, will demonstrate if there are any revenue costs to be met by the developer, at least initially if there is a period before the benefits of HS service calls

outweigh the disbenefits (for existing passengers through longer journey times). The DfT has also been asked to clarify this, so that any future provision for this expenditure can be made.

Westenhanger Station

7.6.8 An upgrade to the passenger facilities at Westenhanger Station is being sought in conjunction with key stakeholders. The station is intended to provide a major hub of activity within the settlement, enhanced transport interchange, an identity for commercial, social and residential land uses and improved linkages for visitors to Westenhanger Castle.

7.6.9 The scope of work for improvements to Westenhanger Station is summarised in Table 9:

Table 9: Summary of Westenhanger Station improvement works

Phase 0 – Before construction commences of Otterpool Park	Phase 1 – Works to be delivered after completion of a specified number of homes (TBC with FHDC)	Phase 2 - Works to be delivered after completion of a specified number of homes (TBC with FHDC)
Modest Improvements to the station including: • New cycle parking facilities. • Bus stopping facility including bus stops for scheduled and rail replacement services and complete remodelling of the current forecourt. • Car parking provision for 270 to 300 spaces, using pay & display with Smart / card-reader payment, electric vehicle charging points, statutory level of DDA spaces with nearest level access to station. • Creation of Controlled Parking Zone (CPZ) beyond station area.	Substantial improvements to the station including: • Platform extensions to become new 12 car length. • New access-for-all footbridge with integrated lifts. • A total of four new platform shelters. • New canopy to cover at least 30% of whole length of each platform. • Use of Diversity Impact Assessment (DIA) specialist to advise on accessibility provision. For Network Rail, Phase 1 includes making passive provision for the new station building (based on Phase 1 Masterplan). Southeastern are expected to deliver ticket vending machines, customer information screens, LED lighting and possible provision for catering.	• New station building with waiting room, ticket office, passenger waiting area, staff accommodation, public toilets including for disabled passengers.

7.7 Shared Mobility

Bike / Scooter Share

7.7.1 Bike and scooter share schemes, including electric options, will be established in the early phases of the Otterpool Park. Initially, a network of bike and/ or scooter share hubs will be provided at local centres and at the Westenhanger Station and then the scheme will be expanded as new development phases are completed. The share bikes/ scooters will be fundamental part of Otterpool Park Mobility as a Service strategy and are described further on in this report.

Car Club

7.7.2 According to CoMo.org, car clubs are more likely to be successfully established within a development (or in the neighbourhood adjacent to a development) if consideration is given early enough in the planning process to its viability as a location. Car club bays will be considered at the early stage of the development to allow the scheme to be encouraged to prospective occupants, prior to occupation. Car club provision will offer development users who do not require a car on a regular basis the option to drive without the high cost and long-term maintenance associated with the private car.

7.7.3 In Otterpool Park the location of electric car club bays will be decided based on specific factors that may help the scheme be successful, including:

- Population density
- Availability of public transport
- Parking constraints.

7.8 Mobility Hubs

A 'Mobility Hub is a recognisable place with an offer of different and connected transport modes supplemented with enhanced facilities and information features to both attract and benefit the traveller.' (CoMo.org.uk)

7.8.1 Mobility hubs integrate shared, active and public transport modes in one location, providing attractive options for continuous journeys whilst also contributing to reductions in carbon emissions and offering an opportunity to improve the public realm. In addition, Mobility Hubs support low car lifestyles and the reallocation of space from car parking to housing or public realm improvements.

7.8.2 Advantages for users of Mobility Hubs are vast, users:

- Can select travel options based on personal preferences, such as cost or convenience.
- Have control over journey time by making adaptive choices.
- Can avoid overcrowding public transport and congestion, which improves traveller comfort.
- Can make productive use of journey time by accessing online services as they travel.

7.8.3 At Otterpool Park, Mobility Hubs will be placed at significant points of major public transport corridors and local commercial centres, supporting the public and active modes of transport.

7.8.4 Each Mobility Hub will be designed based on the requirements of the area and will be spatially organised in a way to facilitate access to and from different modes of transport such as, bus and/or train services, car clubs, shared bikes and scooters and EV and bike charging points. Covered waiting area providing seating, Wi-Fi, phone charging, lockers and refreshment retailer may also be incorporated within the hub.

7.8.5 A three-tiered strategy is proposed for the distribution of mobility hubs based on the WSP dashboard, this is as follows:

- Primary Hubs - to support travel to and from the development connecting to the rail station and town centre.
- Secondary Hubs – to accommodate internal travel within the site connecting to primary schools and parks.
- Community Hubs – to serve local residents within their neighbourhoods.

7.8.6 It is intended to provide temporary/pop-up Mobility Hubs at the start of the development at Otterpool Park as phases of the development are implemented. This will provide a focus for the travel options available at the development and raise awareness of alternatives to the private car, enabling sustainable travel habits to be embedded from the outset.

7.8.7 An illustration showing the different components of a mobility hub can be seen in Figure 20.

Figure 20: Illustration of a Mobility hub (Source: CoMoUK Mobility Hub Guidance, 2019)

7.9 MaaS

7.9.1 The possibility of integration of the public transport and modes provided in the mobility hubs could be facilitated by the implementation of a Mobility as a Service (Maas) Strategy which is a single application to provide access to mobility, with a single payment channel instead of multiple ticketing and payment operations.

7.9.2 The implementation of MaaS will be proposed to the existing public transport operators in the vicinity of the Otterpool Park development.

7.9.3 MaaS should provide the best value proposition, by helping the Otterpool Park residents meet their mobility needs and solve the inconvenient parts of individual journeys as well as the entire system of mobility services.

7.9.4 A successful MaaS service also brings new business models and ways to organise and operate the various transport options, with advantages for transport operators including access to improved user and demand information and new opportunities to serve unmet demand.

Kent County Council have orchestrated the creation of a sustainable multi-modal MaaS Framework and is to introduce MaaS in Ebbsfleet. The Customer MaaS app & website will seek to deliver integrated journey planning, ticketing and payments and support door to door travel for a wide range of transport offering monthly multimodal travel subscription products as well as Pay As You Go (PAYG) to an integrated transport system. All travel needs for residents and visitors in Ebbsfleet will be supported through the MaaS app and website.

7.9.5 The introduction of MaaS would bring a step change in modal shift away from private car ownership, and the principals of such a scheme is welcomed at Otterpool Park. There will be continual liaison with KCC to develop a MaaS solution at Otterpool Park.

8 Street Design Approach

8.1 A Connected Place

8.1.1 Otterpool park will provide users with choices on how they move around the development, with a strong emphasis on walking and cycling along with public transport options. The development will be designed to encourage sustainable and active modes of transport and in turn reduce the reliance on the private car. This is proposed to be achieved through:

- Linked Street and Routes
- Regular connections
- Street hierarchy

8.1.2 The design principles to A Connected Place are set out in the Strategic Design Principles document, and a summary is provided below providing the requirements of the Detailed Design code for each parcel of land when they are developed.

- Mobility hubs are to be well-integrated as part of key public realm spaces.
- Masterplan development for each parcel of land is to incorporate a grid of linked streets, relating to the character and topography of the area.
- Create a permeable layout through block sizes that support regular connection.
- Street hierarchy to be incorporated based on the types set out in the Strategic Design Principles document (summarised in the next section).

8.2 Street Hierarchy

8.2.1 A street hierarchy creates a distinction between different types of streets so major roads connecting key destinations have a different feel to residential streets that serve the local community. Major routes are design to serve both local and non-local traffic so through-traffic is discouraged from entering local residential streets.

8.2.2 Strategic Streets are the main distributor roads and within the Otterpool Park site, this is the A20 which links to the M20. The A20 and new link streets will have two single lanes for traffic, segregated pedestrians and cycle lanes with streetscape of trees and green verges. The design speed of the strategic street would be 30mph, with some areas including the town centre would be lower at 20mph. The A20 that runs through the Otterpool Park development will be designed as a thriving urban street, with reduced speeds, development fronting onto it will be designed to allow easy pedestrian and cycle crossing and avoid creating a barrier between the north and south of the town.

8.2.3 Six street types have been developed for Otterpool Park, these are set out within the Strategic Design Principles document. A summary is set out in Table 10.

Table 10: Street Types developed for Otterpool Park

Street Type	Design Speed (mph)	Role and Function
Greenway	20	• Restricted access to limited numbers of homes on the edges of the development • Shared surface treatment with passing places and intimate scale • Linked by pedestrian and cycle paths with no through-routes for vehicles
Residential Mews and Homezone	20	• Shared or 'pedestrian-priority' surfaces for pedestrians, cyclists and vehicles • Restricted through-routes for vehicles, connections for pedestrians and cyclists take priority • May include careful integration of on-street parking
Tertiary Street	20	• Footpath on one side and wide verges, with buildings facing onto the street • Cyclists share surface with cars • Streets may narrow with landscape or integrated on-street parking to control cars, with passing places
Secondary Street	20	• Predominantly residential in character, connecting key destinations within character areas • Cyclists have demarcated cycle lanes within the road carriageway
Primary Street	20	• Main transport routes connecting key destinations (the Town Centre and Local Centres) within Otterpool Park as a whole • Two single lanes for vehicles • Segregated pedestrian and cycle lanes provide safe, direct and attractive routes, with dedicated crossing points
Strategic Street	30 & 20	• The A20 (and its new connection, Otterpool Avenue) form the Strategic Street through the new town • Two single lanes for vehicles • Segregated pedestrian and cycle lanes provide safe, direct and attractive routes • Good north-south crossing points provide connectivity across the street

9 Parking Strategy

9.1 Cycle Parking Provision

9.1.1 Parking for cycles will be provided in the development in accordance with the latest policy as a minimum. Policy T5 of the Places and Policies Local Plan (Adopted, September 2020) proposes 1 space per bedroom for individual residential developments. These are based on Kent County Council's Supplementary Policy Guidance SPG4 (2006) and seek to encourage the use of bicycles by:

- Making them more easily accessible to users
- Protecting them from theft
- Ensuring parking facilities are well-integrated into the design of the development

9.1.2 In accordance with Policy T5 of the Places and Policies Local Plan (Adopted, September 2020), cycle requirements for non-residential users are to be agreed with the Council. This would allow flexibility to implement an appropriate level of cycle parking for the development.

9.1.3 The level of cycle parking provision for the development will be established during the Reserved Matters application stage as each parcel of land comes forward.

9.2 Delivering the low car-ownership vision in Otterpool Park

9.2.1 Policy T2 of the Places and Policies Local Plan (Adopted September 2020) sets out the parking standards for cars, and the Interim Guidance Note 3 provides an appropriate foundation of car parking provision giving minimums and maximums dependent on location.

9.2.2 With Otterpool Park being a new bespoke development, it is considered vital that the level of car parking provision be appropriate for the needs of all site users, including residents, employees and visitors.

9.2.3 Through discussion with Kent County Council, it is proposed the level of residential car parking provision be dependent on the dwelling type and the accessibility level of the land parcel that the dwelling is located. An accessibility scoring system based on proximity to public transport and local facilities for parcels of land in the development will be established to determine the appropriate level of car parking provision. For flexibility it is envisaged that the provision for each score category would be set as a range. It is intended that the category of area for which parking levels apply are agreed for each phase of the site as it comes forward. This will push the boundaries for residential car parking provision to a reasonable minimum.

9.2.4 For the non-residential uses within the town centre and local centres, each development would require detailed consideration of linked visits in order that parking provision reflects the mix of land uses and locational characteristics.

9.2.5 A number of measures to encourage the move away from private car ownership will be at the heart of Otterpool Park development values. This approach supports the local policy context (TfSE Transport Strategy) encompassing future mobility and planning for low carbon communities.

- The development will be designed to prioritise pedestrians, cyclists and those with mobility impairment over cars, providing great permeability within the site and good connection with the surrounding area.
- There will be direct accesses and walkable distances to local facilities.
- Bus services will be accessible, frequent and reliable for residents to connect within the site and to key destinations.

- The improvement of the facilities at Westenhanger Station is being sought to provide a better experience for passengers.
- The implementation of share bikes/ scooters schemes including electric and electric car clubs will be sought at the beginning of each phase.
- Mobility hubs will be part of the urban design.
- All modes will be connected by the advanced technology of MaaS.
- There will be a bold approach to push the boundaries on car parking to an appropriate and reasonable minimum.
- There will be a Controlled Parking Zone (CPZ) covering a significant network of roads beyond the precincts of Westenhanger Station, in order to prevent all-day on-street parking by both commuter and leisure rail passengers, all of whom will have use of the proposed new station car park
- Electric vehicles/ bikes facilities will be widely available throughout the development.

9.2.6 The level of car parking provision for the development will be established during the Reserved Matters application stage as each parcel of land comes forward.

9.3 EV Strategy

9.3.1 Greenhouse Gas (GHG) emissions are causing the average temperature of the earth to rise. Global warming is causing irreversible harmful effects to ecosystems, coastlines, water, food and health across the world. The UK has therefore committed to reducing GHG emissions by at least 80% of 1990 levels by 2050, through its Climate Change Act (Department of Energy and Climate Change).

9.3.2 As mentioned previously, FHDC declared a climate emergency in 2019, and aims to meet its net-zero emissions target by 2030. A Climate and Ecological Emergency Working Group is in the process of producing a Carbon Action Plan, which is proposed to be a living document with regular reviews. The council is already taking steps to reduce the council's carbon footprint including installing a network of EV charging points across the district.

9.3.3 Electrically powered Low Carbon Vehicles (LCVs) need to recharge their batteries in suitable locations, at appropriate times of day/night and for a suitable duration, using recharging infrastructure. Hence the need to develop a guide for developing an EV charging network across Otterpool Park. The development will need to provide for the future requirements for electric vehicles as well as give the flexibility to adapt to innovative transport solutions such as autonomous vehicles. There will be a need for ongoing monitoring and research of emerging technology and incorporation of new measures into the travel plan and transport strategy. At this stage, as part of each relevant Reserved Matters Application, the suggested measures would include:

- Provide passive provision for electric vehicle charging at all homes with allocated parking spaces as well as to on-street parking areas.
- Develop a bespoke EV charging point strategy for each phase of the development.
- Develop an electric vehicle car club strategy.
- Share bike/ scooter scheme will include electric provision.
- Public engagement to improve understanding and awareness of the benefits of EVs amongst private vehicle owners.

10 Delivery and Servicing Strategy

10.1.1 Express delivery services are booming due to their low cost, convenience, and the fast growth in online shopping. The UK already has the second highest market penetration of eCommerce in the world, making up around 20 per cent of sales as a percentage of all retail sales. At the same time, the UK's freight system makes a significant contribution to transport greenhouse gas emissions and is a cause of poor air quality. HGVs and vans together contributed 32 per cent of the UK's greenhouse gas emissions from transport in 2016 (National Infrastructure Commission, 2019).

10.1.2 Government, the freight industry and infrastructure providers are considering how to utilise emerging technologies, address barriers to their deployment, and deliver a sustainable and efficient freight system that is fit for the future.

10.1.3 It is proposed that at Otterpool Park should provide the following measures as part of its Delivery and Servicing Strategy:

- Aspiration for all delivery vehicles for all supermarket deliveries to be EV on site, potentially governed by the management company.
- Engage with businesses to discuss the barriers to EV adoption and replacement of fleet vehicles with alternative powered vehicles.
- Seek to use commercial vehicles powered by sustainable fuels to serve the development.
- Provide an 'edge of development consolidation centre' where all parcels are delivered, which are then delivered locally to reduce freight transport. This would encourage the distribution of freight via sustainable modes such as e-vans and electric/pedal cycles for the last mile.
- Provide package delivery lockers at strategic locations.
- Aim to use suppliers with efficient vehicles.
- Plan freight movements outside of peak times where possible.

10.1.4 The Delivery and Servicing Plan will be developed and managed by the Travel Plan Coordinator and the Travel Plan Steering Group will monitor its implementation. The Plan will identify the responsibilities for delivery in line with the three-tier approach.

11 Benefits

11.1.1 This chapter describes the potential benefits that could be expected from the development with the Transport Strategy principles applied compared to the TA approach. The scenarios used for the Transport Strategy principles are the User -Centric Approaches of the Best Case (Phase 1) and the User Survey scenarios described in Chapter 5.

11.2 Potential Environmental Benefits of the User-Centric Approach

11.2.1 The metrics used to compare the potential environmental benefits is Carbon Dioxide (CO2) tonnage, based on the estimated vehicle trips generated by the development in the various scenarios:

- TA Approach
- User Survey Scenario
- Best Case (Phase 1) Scenario

11.2.2 The estimated number of driver trips generated by the Otterpool Park development in the AM and PM peak hours are reported in the Transport Assessment (ES Appendix 16.4). The equivalent daily vehicle numbers have been determined for each scenario based on the Department for Transport data, Table TRA0307 which reports the motor vehicle traffic distribution by time of day and day of the week on all roads in Great Britain for 2019.

11.2.3 The CO2 tonnages per annum can be determined based on the number of expected vehicle trips, for the purposes of this analysis, each vehicle trip is assumed to have the following attributes to provide a like for like comparison:

- 2030 Emissions
- Trip length of 10km
- Averaged speed of 50kph
- 0% HGV

11.2.4 The resulting CO2 tonnages and potential differences are summarised in Table 11.

Table 11: Estimated CO2 Tonnages for User Centric Approach compared to TA Approach

Scenario	Estimated Daily Vehicle Trips	Estimated CO2 t/yr	Reduction compared to TA Approach
TA Approach	38,708	15,053	-
User Survey	21,844	8,494	6,559 (44%)
Best Case (Phase 1)	16,368	6,364	8,689 (58%)

Table 11 shows that there is potential reduction of up to 8,689 CO2 tonnes per year when comparing the Best Case (Phase 1) scenario to the worst case of the TA approach, this equates to a 58% reduction.

11.3 Potential Socio-Economic and Health Benefits of the User Centric Approach

Introduction

11.3.1 This section explores the potential socio-economic and health benefits that could occur if the principles of the Transport Strategy are applied, and the User Centric approach adopted compared to the TA approach (described at Section 5.2). The analysis is primarily qualitative and based on an assessment of case studies and a review of relevant comparative data and literature. In summary this section covers the following:

- Assessment of potential socio-economic and health benefits from the User Centric approach
- Overview of relevant baseline context
- Evidence review to provide information to help understand potential benefits that could occur at Otterpool Park
- Summary of potential benefits and comparison of different potential transport strategy approaches.

Potential Benefits

11.3.2 Socio-economic and health benefits could occur because of the proposed measures of the User Centric Transport Strategy approach as set out at Chapter 5 (Figure 7). These measures will help to ensure that walking, cycling and active travel options are the best options for short journeys within Otterpool Park. They will also include street design that is user centric and smart infrastructure and mobility services that encourage non car modes.

11.3.3 The key socio-economic and health benefits that could occur because of the User Centric Approach measures can be summarised in the following main categories:

- **Individual health and wellbeing benefits:** Individual health benefits occur from people being more active and through improved air quality, reduced noise and traffic impacts. Both physical and mental wellbeing benefits can be achieved through increased active travel, including improvements in mental wellbeing as a result of exercise and being out in the open. This effect can help people to lead longer and happier lives, which although difficult to monetise/quantify is a significant benefit.
- **Direct and indirect economic benefits:** A healthier population is less of a burden on the NHS. Also, active travel helps enable economic growth through reduced congestion, collisions, pollution, and creating a healthier workforce who are happier, more productive and less prone to absenteeism.
- **Wider benefits to global society by helping to address climate change**: If not adequately addressed climate change could have potentially very significant economic costs. By helping to reduce carbon by helping people move towards more sustainable travel modes, the User Centric approach contributes to the avoidance of this potentially huge economic cost.
- **Local Community and Wider Society Benefits:** Benefits to society can occur from reducing car dependency, encouraging people to interact more, improving air quality, noise impacts and traffic accidents which are factors that statistically affect deprived areas more than affluent areas. Active travel can also create a greater ‘sense of place’ and ‘civic pride’. This can have ‘spin-off’ effects in terms of boosting local business confidence and attracting greater investment.

11.3.4 The potential benefits highlighted above are explored in greater detail with reference to specific research and data in section 11.2.4 below.

Socio-economic and Health Characteristics

11.3.5 A brief sample is provided below of some socio-economic, health and wellbeing baseline information that captures some of the key issues affecting Folkestone and Hythe. Further socio-economic and health baseline information is provided in the Otterpool Health Impact Assessment:

- Folkestone and Hythe District has the second highest premature mortality rate in Kent for under 75 year olds all causes (355.9 per 100,000)[1]. The worst is Thanet at 396.6 per 100,000. Folkestone and Hythe is worse than the average for England (326 per 100,000)[2].
- 11.2% of adults in Folkestone and Hythe were recorded by their GPs as suffering from depression in 2018/19[3].
- Folkestone and Hythe is the 6th worst Kent district out of 12 in terms of physical inactivity and only slightly above the Kent average (20%) in terms of physical inactivity by adults (2017/18) with 20.3% performing less than 30 minutes of moderate activity per week[4].
- Childhood obesity: According to data from the National Child Measurement Programme: England, Folkestone and Hythe has a higher proportion of overweight children with 24.11% of reception year children overweight and obese. This compares to 21.06% for Southeast of England region and 22.33% for England[5].
- The 2018 Joint Strategic Needs Assessment (JSNA) Exceptions Report for Kent highlights that older people are the fastest growing group of people in Kent – from 2018 to 2023 Kent's population aged 65 years and over is estimated to grow at a faster rate (11.4%) compared to those aged less than 65 years (5.0%).

11.3.6 The sample summary points above indicate that there are issues of relative poor health and wellbeing in Folkestone and Hythe and also an ageing population who are more likely to encounter health issues. These underlying socio-economic and health factors could be positively influenced by the active travel schemes identified in the User Centric approach.

Evidence Review

11.3.7 This section expands on the potential benefits that could occur if the User Centric approach were implemented at Otterpool Park as shown at 11.2.2, with reference to particular evidence and research studies.

Individual health and wellbeing benefits

11.3.8 In terms of potential individual health and wellbeing benefits from the User Centric approach there is a wealth of evidence and research studies that explore the links between use of active travel and improvements to an individual's physical and mental health. Physical inactivity is one of the most important health challenges currently facing the UK population. Regular physical activity helps to prevent obesity and people becoming overweight. Activity can also reduce the risk of many chronic conditions including coronary heart disease, stroke, type 2 diabetes, cancer and musculoskeletal conditions[6].

11.3.9 There is also evidence that physical activity can be beneficial for those with mental health problems, reducing depressive symptoms and increasing quality of life[7]. Health agencies

[1] NHS Primary Care Mortality Database Nov 2018
[2] Kent Public Health Observatory Report (Dec 2019)
[3] *ibid*
[4] *ibid*
[5] 2018/19 intake source: NHS Digital National Child Measurement Programme: England (2020)
[6] Public Health England, Obesity and the environment: increasing physical activity and active travel, November 2013
[7] Rosenbaum S, Tiedemann A, Sherrington C, Curtis J, Ward PB. Physical activity interventions for people with mental illness: a systematic review and meta-analysis. J Clin Psychiatry 2014; 75(9): 964-74. 10.4088/JCP.13r08765

generally recommend 30 minutes or more of moderate-intensity physical activity on most days of the week in order to keep oneself in good health[8].

11.3.10 The Otterpool Park User Centric approach will provide greater opportunities for achieving the recommended 30 minutes of physical activities on most days of the week:

- Walking and cycling to destinations instead of using a private vehicle, such as to places of work, education and leisure
- Walking and cycling to access public transport to reach further afield. the use of public transport generally involves some walking or cycling to bus stops or train stations. A range of between 8 to 33 additional minutes of walking has been attributed to public transport use as evidenced by research studies[9].

Direct and indirect economic benefits

11.3.11 A range of research studies have concluded that active travel is not only good for people's physical and mental health but also that this has a positive economic benefit for society. The economic benefits of active travel principally relate to enabling a healthier workforce which increases productivity and reduces costs to the public purse. Also, the wider benefits of contributing to the transition to a low carbon economy could be significant as it creates opportunities for businesses such as renewable energy, sustainable transport and smart technologies.

11.3.12 A key report was produced in 2016 by Public Health England, 'Working Together to Promote Active Travel'. The report summarised the following socio-economic benefits of active travel:

- **Reduced costs to Society:** Active travel helps address the issue of physical inactivity. The report states that physical inactivity contributes to 1 in 6 deaths in the UK and costs £7.4 billion (bn) a year to business and wider society. Also, the report provides evidence that switching active travel for short motor vehicle trips could save approximately £17bn in NHS costs over a 20-year period.
- **Increased Economic Prosperity:** Active travel is 'pro-business' and supports economic prosperity by enabling optimal travel to work with reduced congestion, collisions, pollution, and enabling a healthier workforce. A healthier workforce is more motivated and more productive, and absenteeism is reduced.

Wider benefits from helping to address climate change

11.3.13 Active travel, including cycling, e-biking or walking can help tackle the climate crisis by reducing the use of carbon emitting transport modes such as cars and motor bikes. This could contribute to reducing the economic effects of climate change which it is widely accepted could be very significant if global climate change is not reversed. Even though the measures in the Otterpool Park User Centric approach might appear small individually, every intervention that helps to change the current trajectory is essential to combat climate change.

11.3.14 The 'Stern Report'[10] is often considered one of the most important studies assessing the potential economic effects of climate change. It suggests that without action the cost of climate change would be the equivalent of between 5% and 20% Gross Domestic Product (GDP) per annum and would occur every year, forever. Based on the UK's latest GDP estimate (£1.96trillion in 2020) the cost to the UK would be between £98billion and £392billion per annum.

[8] Haskell WL, Lee IM, Pate RR, Powell KE, Blair SN, Franklin BA, et al. Physical activity and public health: updated recommendation for adults from the American College of Sports Medicine and the American Heart Association. Circulation 2007;116: 1081–93.
[9] Fraser SDS, Lock k. Cycling for transport and public health: a systematic review of the effect of the environment on cycling. The European Journal of Public Health 2011; 21(6); 738-43. http://eurpub.oxfordjournals.org/content/21/6/738
[10] UK Government; Stern Review on the Economics of Climate Change (2006)

11.3.15 Research by University of Oxford's Transport Studies Unit[11] has found that swapping the car for active transport just one day a week can have a material effect on the reduction of carbon emissions. The research assessed around 2,000 urban dwellers over time and found that those who switch just one trip per day from car driving to cycling reduce their carbon footprint by about 0.5 tonnes over a year.

11.3.16 Although this section does not attempt to quantify the economic costs and benefits of the active travel measures, to help provide some useful context, the latest UK cost per tonne of carbon saved is assumed to be around £50[12].

11.3.17 Other interdependent sectors to be considered for climate change in relation to its social cost include floods and coastal erosion, water quality and availability, land use change and pollution. The benefits highlighted above could result in a lesser impact on these factors.

Local Community and Wider Society Benefits

11.3.18 There is some evidence that shows how active travel can reduce inequality and improve social cohesion. Further, creating an environment where people actively choose to walk and cycle as part of everyday life can have a significant impact on public health and may reduce inequalities. Disadvantaged areas tend to have a higher density of main roads. This discourages active travel and leads to poorer air quality, higher noise levels and higher collision rates. In general, residents of deprived communities tend to travel less than the wealthier but have a greater exposure to the negative impacts of other people's travel. Therefore, by reducing car dependency and encouraging active travel, societal inequalities can be reduced and social cohesion can be improved[13].

11.3.19 Poor public transport provision can lead to social exclusion, contributing negatively to quality of life and health and equality of outcome. This will have a more significant impact on vulnerable populations[14].

11.3.20 For the elderly, safety, street connectivity and the availability of good pedestrian access will influence pedestrian travel as a preferred mode of travel. There is also a link between socio-economic grouping, health and active travel. For example, there are inequalities in obesity rates between different socio-economic groups – research shows that among children in reception and Year 6, the prevalence of obesity in the 10% most deprived groups is approximately double that in the 10% least deprived[15]. Encouraging active travel within these socio-economic groups can thereby improve overall public health outcomes and lead to a reduction in inequality.

[11] Oxford University Transport Studies Unit (2021) Get on your bike: Active transport makes a significant impact on carbon emissions | University of Oxford accessed 19/08/21

[12] LSE; How to Price Carbon to reach net-zero emissions in UK (2019)

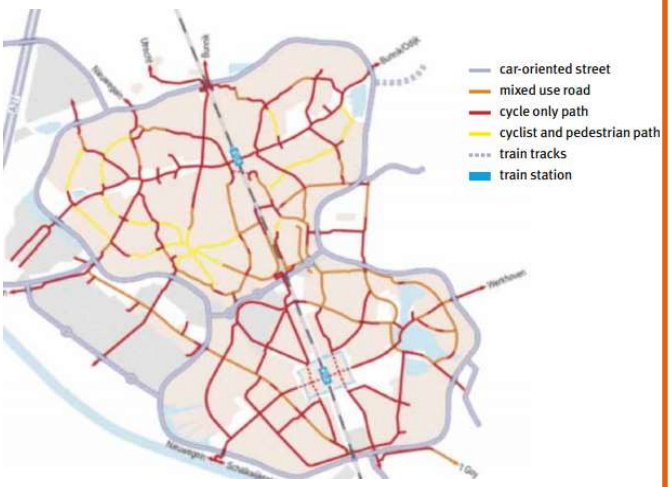
[13] 2016 by Public Health England, 'Working Together to Promote Active travel'. The report summarised the following socio-economic benefits of Active Travel

[14] Thomson H, Jepson R, Hurley F, Douglas M. Assessing the unintended health impacts of road transport policies and interventions: translating research evidence for use in policy and practice. BMC Public Health 2008; 8:339. 10. 1186/1471-2458-8-339

[15] Public Health England, Obesity and the environment: increasing physical activity and active travel, November 2013

Case Study: Houten, The Netherlands

Houten is a new settlement designed to encourage active travel and reduce car use. It includes 129km of cycle paths and bike sharing schemes. 66% of trips within the settlement are made without the use of a car and access to public transport to commute to the nearest large settlement, Utrecht is cheap, highly accessible and with frequent services.



The emphasis on Active Travel has led to a more active and healthier population. For example, an estimated 78% of residents are active for 2.5+ hours a week compared to 55%* for the Netherlands. Also, Houten benefits economically as people are more likely to shop within the settlement. This has led to turnover per m2 of retail in the centre that is 2.5

**Figures from the Health Survey for England show that 67% of men and 55% of women aged 16 and over do at least 2.5 hours of moderate physical activity per week, comparable to the Netherlands.*

Comparison of Potential Transport Scenarios

11.3.21 This section provides a high-level comparison of the relative health and economic benefits of the three transport scenarios as shown in section 11.1. Analysis has been performed on the total trips at AM peaks by different mode for each of the three scenarios. This is shown in Table 12 below. Based on the mode share a high-level assessment can be made of the extent to which each option contributes towards achieving the four main benefit categories described at 11.2.4 above. The scoring is based on professional judgement.

Table 12: Comparison of relative socio-economic and health benefits from active travel of Otterpool transport scenarios

Scenario	Private Car % of total trips AM peak	Public Transport % of total trips AM peak	Active Travel % of total trips AM peak	Individual health and wellbeing benefits:	Economic benefits from Active Travel	Climate change benefits	Community and Society benefits:	Conclusion / Justification
TA Approach	46%	7%	37%	+	++	-	++	Greater car use so bad for climate change & health
User Survey	23%	29%	42%	++	++	+	++	Less car use and similar active travel use to other scenarios
Best Case (Phase 1)	16%	38%	41%	+++	++	++	++	Lowest car use, highest public transport use and similar active travel use

11.3.22 The high-level assessment shows that the User Survey and Phase 1 User Centric scenarios are likely to produce the greatest health and socio-economic benefits from active travel. It should be noted that active travel trips are effectively the same for each of the scenarios, but the Transport Assessment scenario has a much higher proportion of car use.

11.3.23 In summary, significant potential benefits could occur if this approach was followed. These benefits relate to reducing the effects of climate change, which could have a major economic cost to society, health and wellbeing benefits for individuals, such as people being able to lead longer healthier lives and reduced burden on the taxpayer by reducing visits to hospital, GPs etc. Finally, active travel could lead to reduced congestion and accidents and could boost sectors of the economy that focus on active travel and sustainability.

12 Summary and Conclusions

12.1 Summary

12.1.1 This Transport Strategy document has been prepared to provide the overarching Transport approach of the Otterpool Park development. It sets out the need for the development and presents the numerous transport enhancements and services proposed to be delivered as part of Otterpool Park.

12.1.2 A Transport Assessment (ES Appendix 16.4) has been undertaken using a 'predict and provide' methodology, that is derived from historic trip rate patterns. This results in a worst-case scenario for vehicle trips generated by the development, and the Assessment provides confidence that even in this scenario there are appropriate highway infrastructure proposals that can mitigate the effects. Nevertheless, this is not the desired approach for the development.

12.1.3 The Transport Strategy has been introduced to provide more progressive mobility interventions in line with the change in the way people will travel in the future and consistent with FHDC's aim to achieve the net-zero emissions target by 2030. A user centric approach has been adopted for the future mobility principles in the scheme design of Otterpool Park. This method is based on the results of an online survey of respondents across London and Kent and investigating how they travel today and what they value as being important factors that influence their travel mode choices. This forms the basis and starting point of deriving ambitious mode share targets for the residents and users of the Otterpool Park development.

12.1.4 The Transport Strategy is founded on the following principles:

- Create walkable neighbourhoods and a high street highly accessible by walking and cycling.
- Provide strong walking, cycling and bus connections to rail station, employment, high street, local centres and schools from residential areas.
- Provide wider connectivity by walking, cycling and bridleways into surrounding countryside and existing communities.
- Ensure a high level of connectivity to and from Otterpool Park within the sub-region by frequent high-quality public transport.
- Minimise and manage the impacts of traffic on existing road network particularly through existing communities and other sensitive areas.
- Provide appropriate levels of parking for cars and bicycles.
- Implement a range of sustainable travel behavioural measures to encourage use of sustainable modes.
- Provide for future needs for electric vehicles and flexibility to adapt to innovative future mobility solutions.
- Reduce the need to travel by providing relevant on-site facilities.

12.1.5 To facilitate and encourage the shift of increased active and sustainable modes of travel, a range of strategies and provisions are proposed as part of the Otterpool Park development, these include:

- Walking and Cycling Strategy
- Bus Service Enhancements
- Rail Enhancements
- Shared Mobility Schemes
- Mobility Hubs
- MaaS
- Healthy Streets Approach

- Parking Strategy
- EV Strategy
- Delivery and Servicing Strategy

12.1.6 The vision is that through adopting the Transport Strategy principles and supporting these by implementing the above, the requirements for the highway access strategy identified in the TA will be reduced or no longer be required as the threshold of when they are needed are never reached. The monitor and manage approach that will be adopted by the development will facilitate this by having regular evaluations of the highway network use as well as overall use of all other travel modes offered at Otterpool Park.

12.2 Conclusions

12.2.1 The Otterpool Park development will provide residents, employees and visitors with an attractive and comprehensive network of sustainable travel opportunities to provide viable alternatives to travel by private car. Through the user-centric mobility strategy ambitious sustainable mode-share targets have been derived for the site. The monitor and manage approach will facilitate with the promotion of active travel modes and will be part of an iterative process that optimises mobility services.

12.2.2 The TA undertaken has been based on the traditional 'predict and provide' approach which results in a worst-case scenario for vehicle trips. This assessment provides confidence that even in this scenario there are measures that can be implemented on the highway infrastructure to sufficiently mitigate the impact.

12.2.3 The proposed approach at Otterpool Park is to comply with existing policy requirements and respond to emerging policy and technology advances. It is intended that the worst-case vehicle trip generation scenario forecast in the TA will not be reached, because site users will opt to travel using the sustainable alternative modes offered by the development instead.

12.2.4 The overall design of Otterpool Park is focused on the opportunities for excellent sustainable transport provision. A network of routes, infrastructure and green spaces will be created which include both direct and leisure routes, accessible to all from home to work, and play.

12.2.5 The Otterpool Park development will provide new homes along with associated amenities including employment, retail, education, leisure and community facilities. These will enhance the opportunities for maximising the internal trips on site. The Transport Strategy principles will promote sustainable and active travel which will bring social, economic and environmental benefits to Otterpool Park users.

Arcadis (UK) Limited

Corner Block
2 Cornwall Street
Birmingham
B3 2DX
United Kingdom

T: +44 (0)121 503 2700

arcadis.com