Gravity

Smart Campus

Gravity LDO Environmental Statement

Volume 2 – Appendices

Appendix 9.2 Framework Travel Plan

Gravity Local Development Order

Framework Travel Plan

Consultation Draft

On behalf of **This is Gravity** and **Sedgemoor District Council**

Project Ref: 49102 | Rev: A | Date: October 2021

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This report has been prepared by Stantec UK Limited ('Stantec') on behalf of its client to whom this report is addressed ('Client') in connection with the project described in this report and takes into account the Client's particular instructions and requirements. This report was prepared in accordance with the professional services appointment under which Stantec was appointed by its Client. This report is not intended for and should not be relied on by any third party (i.e., parties other than the Client). Stantec accepts no duty or responsibility (including in negligence) to any party other than the Client and disclaims all liability of any nature whatsoever to any such party in respect of this report.

Foreword

This is Gravity Ltd (Gravity), is proposed to be the UK's first commercial smart campus, creating a blueprint for a smarter, cleaner future - faster. It will deliver a new era of possibility by hosting and supporting companies who are committed to making a difference socially, economically, and environmentally, driving the UK's transition to a cleaner economy.

With its unique scale and immediate availability as a 616-acre enterprise zone, excellent connectivity to national and local infrastructure including Bristol port and airport, the Site is located at the heart of a South West innovation cluster comprising Bristol University's Smart Lab, the Bristol Robotics Lab, the National Composites Centre, the Institution of Advanced Automotive Propulsion (IAPPS), creating a centre of excellence in the UK for transport decarbonisation, electrification and innovation.

With dark fibre in place, and working with Cellnex, Gravity can offer digital connectivity as well as an accessible talent pool including four top-tier universities and a high performing college close by to meet workforce needs. With on-site water provision, national scale energy including renewable and low carbon energy infrastructure and energy management solutions, Gravity can provide occupiers with the ability to invest, transform and create a new era of green jobs driven by advanced manufacturing, as part of a 4th Industrial Revolution.

Gravity establishes the foundations for accelerating and transforming the economy through enabling a smart campus whilst simultaneously creating a new commercial environment geared to cutting greenhouse gas emissions, creating good jobs, integrating low carbon homes and realising positive social outcomes for local communities. Gravity will be a low carbon campus generating more than 4000 green collar jobs and potentially up to 7500 jobs, depending on end occupier, providing both a strategic economic stimulus to drive economic renewal, shaping and connecting to a green supply chain across the UK. Home to international business, start-ups and SMEs, Gravity will be a home for Clean Growth and green industries, creating the space to innovate and create sustainable solutions from energy solutions to smart homes and new smart mobility choices. Gravity is a UK destination for international occupiers and will drive the delivery of the Sedgemoor, Somerset, and Heart of the Southwest Local Enterprise economic, climate change, and Local Industrial Strategy: delivering transformational investment opportunities, unlocking connectivity through infrastructure, and bringing new higher value employment and skills opportunities to the Southwest as a whole.

Gravity is being taken forward through a Local Development Order (LDO) which is a route to planning permission. LDOs are a positive planning tool and a marketing tool for the locality and site. They create a more certain planning environment for investors and potential occupiers, and thereby make inward investment more attractive. They embody a fundamental shift on the part of local authorities from waiting for the market to come to them with a proposal, to initiating development by granting permission for the kind of development that they want to come forward on a site. The Gravity LDO is therefore informed by the market to be highly responsive in a national and international context and will help Sedgemoor, Somerset and the Southwest region, compete for scarce investment against other national and international competitors.

The function of an LDO is to accelerate delivery. They are about adopting a local solution to simplifying planning and provide local authorities with a flexible tool to address particular circumstances. Over 100 LDOs now exist across 80 authorities who wish to be proactive in attracting investment. The Gravity LDO will further demonstrate SDC's proactive approach to economic development and being 'open for business'. As such, in adopting the Gravity LDO, Sedgemoor will add a robust management tool for the EZ, to complement the Development Plan, to achieve corporate, economic, and planning policy objectives to the benefit of the local, regional, and national economy providing maximum benefit to the Sedgemoor community.

Contents

Foreword ..... **iii**
1 Introduction **1**
1.1 What is a Travel Plan? 1
1.2 Project Background 1
1.3 Site History 2
1.4 Scoping Consultation 5
1.5 Travel Plan Policy Context 6
1.6 Purpose of the FTP 12
1.7 Purpose of Individual Site-Specific Travel Plans 13
1.8 Delivery Against Aims and Objectives 14
1.9 Report Structure 14
2 Baseline Transport Conditions **16**
2.1 Introduction 16
2.2 Site Access 16
2.3 Local Facilities 17
2.4 Walking and Cycling 17
2.5 Public Transport 23
2.6 Highway Network 24
2.7 Summary 25
3 Emerging Evidence on Future Travel Trends **27**
3.1 Introduction 27
3.2 Summary 33
4 Development Proposals **34**
4.1 Introduction 34
4.2 Gravity Vision and Ambitions 34
4.3 LDO Parameter Plans 36
4.4 Mix of Land Uses 36
4.5 Developing the Gravity Transport Strategy 39
4.6 Gravity Transport Mobility Strategy Principles 41
4.7 Vehicular Site Access 45
4.8 Off-Site Pedestrian, Cycle and Micro-Mobility Access Proposals 47
4.9 Bus Service Proposals 51
4.10 Travel Plan Coordinators 53
4.11 Marketing and Promotional Strategy 54
4.12 Summary 54
5 Aims and Objectives **56**
5.1 Aims 56
5.2 Objectives 56
5.3 Delivery of the Aims and Objectives 56

6 Travel Plan Targets 57
6.1 Introduction 57
6.2 Baseline Mode Share 57
6.3 Provisional Target Mode Share 57
6.4 Summary 58
7 Travel Plan Guidance for Future Occupiers & Residents 59
7.1 Introduction 59
7.2 Workplace Travel Plans 59
7.3 The Residential Travel Plan 60
7.4 Individual Site-Specific Travel Plan Coordinators – Roles and Responsibilities 61
7.5 Targets, Monitoring and Review 62
8 Implementation Programme and Responsibilities 64
8.1 Introduction 64
8.2 Implementation Programme 64
8.3 Implementing the Framework and Individual Travel Plan Measures 65
8.4 Site Wide Travel Plan Mobility Coordinator – Roles and Responsibilities 65
9 Management, Monitoring and Review 66
9.1 Introduction 66
9.2 Securing Delivery of the FTP and Occupier Travel Plans 67
9.3 The Need to Monitor, Manage and Review 69
9.4 FTP Monitoring and Review Schedule 69
9.5 Contingency Measures 70

Tables

Table 1-1 Weekday AM and PM peak vehicle trip generation for Extant Consent excluding safeguard land uses 3
Table 2-1 Local Bus Services 23
Table 2-2 Bridgwater Bus Station Departures 24
Table 6-1 Provisional Baseline Modal Share 57
Table 6-2 Provisional Target Modal Share 58
Table 8-1 Implementation Strategy 64
Table 9-1 Proposed Package of Transport Mitigation Measures 67

Figures

Figure 1 – Site Location Plan

Figure 2 – Site Local Context Plan

Appendices

Appendix A Gravity Link Road Plan
Appendix B VES Foot / Cycleway Plan
Appendix C LDO Parameter Plans
Appendix D Concept Masterplan
Appendix E Proposed New Secondary Site Access Drawings

1 Introduction

1.1 What is a Travel Plan?

1.1.1 A Travel Plan is a document that identifies the measures to manage travel to a particular area aiming to reduce the occurrence of private vehicle trips to and from a site or location by supporting and promoting more sustainable travel means such as walking, cycling, public transport use, and car sharing, as well as alternatives to travelling such as tele-working. Measures are customised to the site context, but typically include public transport promotion, car sharing schemes and improvements to cycle facilities and walking conditions.

1.1.2 This Framework Travel Plan (FTP) is a living document that is intended to respond to (amongst other elements) changes in planning and transport policy, development phasing and delivery, available transport infrastructure, new technologies and observed travel patterns.

1.2 Project Background

1.2.1 This FTP has been prepared by Stantec UK Limited (Stantec) on behalf of Gravity and Sedgemoor District Council (SDC) in relation to the Local Development Order (LDO) for a Site known as Gravity, to the east of Junction 23 of the M5, in Sedgemoor, Somerset. The LDO will grant a simplified, flexible planning permission capable of meeting market requirements for the Gravity Smart Campus and Community ("Proposed Development").

1.2.2 The location of the site is as shown in **Figure 1** (LDO boundary plan) and **Figure 2** (site local context plan).

1.2.3 This FTP has been produced in line with Planning Practice Guidance (PPG) on Travel Plans and, as a result, demonstrates the Proposed Development impact in terms of the sustainable modes of walking, cycling, micro-mobility and public transport, followed by the residual vehicular traffic demand. The assessment undertaken has sought to determine whether the surrounding transport network is suitable to accommodate the multi-modal transport impact associated with the Proposed Development.

1.2.4 The 261.54-hectare site is within ownership of This is Gravity Ltd and is within the administrative boundary of SDC, and the full site is a Government approved Enterprise Zone (EZ), designated to attract international inward investment. The Site is largely a brownfield regeneration site, being previously used as a single industrial use as an ordnance manufacturing facility. A previous consent (the 'Remediation Planning Consent') has approved site remediation and this is complete, and a second consent in 2017 for Huntspill Energy Park (HEP – reference number 42/13/00010 - the 'Extant Consent') has enabled the construction of a new link road (Gravity Link Road) as part of that consent, to be completed in October/November 2021.

1.2.5 The LDO represents the next phase of the consenting process to re-imagine the Site within a new era of clean inclusive growth and this will facilitate the delivery of the Gravity Smart Campus and Community, establishing a planning regime for fast-track responses and implementation to be highly responsive to international business needs.

1.2.6 The Proposed Development is framed to attract large scale advanced manufacturing facilities to the UK to accelerate progress towards achieving a net zero carbon economy, hosting new business to support transport decarbonisation and the shift to electrification. Gravity will be a key driver in the UK and regional economy to take positive action to address climate change.

1.2.7 An LDO is intended to grant planning permission for specific types of development within a defined area. LDOs streamline the planning process by removing the need for developers to make a detailed planning application to a Local Planning Authority. The implementation process is replaced by a fast-track compliance process when individual proposals can be authorised within the LDO framework.

1.2.8 LDOs create certainty for prospective occupiers and save time for those involved in the planning process, whilst ensuring that public interests such as inefficient land-use and environmental protection are balanced. A simplified planning regime was a key part of the Memorandum of Understanding between the Government, the District and County Councils and the Heart of the South West Local Enterprise Partnership, to facilitate inward investment and job creation, and to enable local business rates retention from the EZ to support delivery and locality transformation. The LDO responds to that commitment.

1.2.9 Future LDO Compliance Applications will need to demonstrate conformity with this FTP through confirmation that developer responsibilities have been met (e.g. appointment of a site wide Travel Plan Mobility Coordinator) as well as the preparation of occupier specific Workplace and/or Residential Travel Plans.

1.2.10 A Transport Assessment (TA) and Environmental Statement (ES) have also been prepared by Stantec and are submitted to support the Gravity LDO and should therefore be reviewed in conjunction with this FTP.

1.3 Site History

1.3.1 The majority of the Site, formerly known as HEP, received planning permission for an Energy Park in November 2017.

1.3.2 Approximately 250 hectares (616 acres) of the HEP site was part of the former Royal Ordnance Factory (ROF) owned by BAE Systems. The ROF site was closed by BAE Systems in 2008 and the Site was acquired by Gravity in 2017.

1.3.3 Since 2017, Gravity has focused on remediation of the former ROF site, construction of the Gravity Link Road and the re-imagination of the Site to facilitate a new era of clean and inclusive commercial growth which will deliver on climate action and create skilled work. This has been achieved through a review of the UN Sustainable Development Goals to re-position the regeneration of the Site.

1.3.4 Prior to determination of the HEP application, the Site secured EZ status in April 2017. The EZ became live on the 1 April 2017 and runs for 25 years until 2042.

1.3.5 The development approved by the Extant Consent was defined by a Parameters Plan. This identified the scale, location and uses for those parts of the Site for which planning permission was sought, as well as identifying areas safeguarded for energy generating uses, rail connection and leisure uses (which would be the subject of separate planning applications).

1.3.6 The safeguarded land for energy uses do not align with an approach to reduce carbon emissions and therefore have a proactive approach on climate action. There is no certainty in the delivery of outcomes relating to land safeguarded for energy, leisure and rail restoration as no specific consent was granted for those elements of the scheme.

1.3.7 The uses approved the Extant Consent are set out below:

a. 8.78 ha of B1 (max 32,150 sqm)

b. 14.84 ha of B2 (max 43,600 sqm)

c. 30.45 ha of B2 (max 101,310 sqm)

d. Safeguarded: 38.74 ha of energy generation uses, 11.22 ha of leisure / community uses and the rail head

1.3.8 The transport assessment work undertaken in relation to the Extant Consent and approved by the authorities are principally as follows:

- PBA Huntspill Energy Park Transport Assessment, April 2013
- PBA Huntspill Energy Park Supplementary Transport Assessment – Local Road Network, October 2013
- PBA Huntspill Energy Park Supplementary Transport Assessment – Strategic Road Network, September 2013
- PBA Huntspill Energy Park Travel Plan Framework, Rev 05, March 2017

1.3.9 The vehicle trip generation for the HEP scheme, as assessed under application reference 42/13/00010 relating to the Extant Consent, is as shown in **Table 1-1**. Whilst energy generating uses were assessed for robustness in the HEP TA, the trips associated with such uses have been removed from the table below. This has been undertaken because the safeguarded energy land uses did not form part of the final planning approval.

Land Use	AM Arr Trips	AM Dep Trips	AM Tot Trips	PM Arr Trips	PM Dep Trips	PM Tot Trips
B1a	193	32	225	33	176	208
B1b	68	6	74	7	54	61
B1c	79	37	116	14	54	69
B2	322	149	471	58	221	279
B8	259	221	481	238	330	568
Total	**922**	**445**	**1,367**	**350**	**836**	**1,186**

Table 1-1 Weekday AM and PM peak vehicle trip generation for Extant Consent excluding safeguard land uses

1.3.10 **Table 1-1** equates to a total of 1,367 two-way vehicle movements generated in the AM peak period, and a further 1,186 two-way vehicle movements in the PM peak period for the HEP scheme.

1.3.11 It has been agreed through the Extant Consent that the traffic generation set out above could be accommodated on the local and strategic road network provided that the following transport commitments are delivered.

- Gravity Link Road scheme including the new site access proposals and the Green Bridge.
- Improvements to the A39 / Hillside and A39 / Hall Road junctions (forming part of the above scheme).

- Puriton and Woolavington Village Enhancement Schemes (VES) providing a series of agreed highway, walking and cycling improvements to enable better accessibility to the site.

- Travel plan obligations (approach being framed as part of the discharge process for the existing consent to enable and encourage early potential investors / first movers).

- A38 Dunball Roundabout upgrade or a contribution toward, up to a maximum sum of £850,000 (based on agreed defined trigger points linked to the occupation of B1, B2, B8 use floorspace).

- M5 Junction 23 partial signalisation or a contribution toward with occupation of B1, B2, B8 use floorspace limited as per agreed defined trigger points.

- Financial contribution toward local authority delivery of the Local Transport Infrastructure Delivery Fund to help bring forward transport improvements across the locality.

1.3.12 A few buildings, including some currently being used as site offices by Gravity, are still located on the Site. These will be demolished under the LDO as shown on the Existing Buildings to be Demolished Parameter Plan as submitted to support the LDO.

1.3.13 The majority of demolition and remediation works at the Site were completed in November 2020.

1.3.14 Various elements of the Extant Consent have also been implemented as follows:

- The new road access onto the A39, referred to as the Gravity Link Road. Construction of the road, along with some other changes to the A39 Hall Road and A39 Hillside junctions, is scheduled to open in October / November 2021.

- An employment and skills plan which is part of the local labour agreement implementation has been agreed through the Gravity Link Road contractor.

- The VES, an obligation within the Section 106 agreement, has achieved planning consent and is passing through the technical approval process with Somerset County Council (SCC) to be delivered in accordance with the obligation. This will be in place by Autumn 2022, one year from the opening of the Gravity Link Road.

- Another obligation requiring the agreement of a Framework Local Labour Agreement (FLLA) has also been discharged with the FLLA being agreed and signed by This is Gravity Ltd and SDC in December 2020.

- Ecological works required as part of the demolition and remediation works have been undertaken, including the newt ponds constructed in the north-west corner of the Site; clearance of the majority of trees and vegetation from the development area; great crested newt fencing and badger mitigation.

- A number of pre-commencement planning conditions have also been discharged. These include those which relate to the delivery of the Gravity Link Road but also other site wide conditions. At the time of writing this TA, the following site-wide conditions have been discharged:

    - Condition 12 - Remediation Works

    - Condition 13 - (Parcel Specific Contamination Assessment) (partially discharged at time of writing)

- Condition 22 – Security Masterplan
- Condition 23 – Operation & Maintenance Manual for Surface Water Drainage Infrastructure
- Condition 24 – Ecological Management Plan Framework
- Condition 29 – Strategic Design Code
- Condition 30 – Assessment of Existing Surface Water and Effluent Disposal Infrastructure
- Condition 31 – Strategic Surface Water Management Plan
- Condition 33 – Ecological Reed Bed Assessment
- Condition 34 - Ecological Mitigation and Enhancement Strategy
- Condition 35 – Foul Drainage
- Condition 36 – Strategic Landscape Masterplan

1.3.15 In addition, partial signalisation works to Junction 23 of the M5 have been completed by other parties. The improvement works completed removes the need for the Extant Consent to improve Junction 23 in line with the Section 106 obligation, and the capacity of the junction has been increased in anticipation of the additional traffic that could be generated by the HEP scheme. Contributions have also been made by This is Gravity Ltd to advanced transport modelling and assessment work.

1.4 Scoping Consultation

1.4.1 Comprehensive transport scoping discussions have been undertaken with various stakeholders through a Gravity LDO Transport Working Sub Group where regular meetings and workshops have taken place since November 2020.

1.4.2 The Gravity LDO Transport Working Sub Group comprises of appropriate members representing a range of different stakeholders including:

- Somerset County Council (SCC)
- National Highways (NH)
- Sedgemoor District Council (SDC)
- Heart of the South West Local Enterprise Partnership
- Network Rail (NR)
- Arup representing Sedgemoor District Council
- WSP representing Somerset County Council
- Womble Bond Dickinson
- This Is Gravity Ltd
- Stantec UK Ltd

1.4.3 The purpose of the sub-group has been to provide regular project updates as part of an extensive pre-application consultation exercise discussing emerging plans and assessment methods, to understand the key deliverables and discuss mobility strategies for the site.

1.4.4 The FTP approach has been discussed with SCC officers through the Transport Working Sub-Group including the requirement for a bespoke FTP tailored to align with the vision and ambitions for Gravity and the LDO approach.

1.5 Travel Plan Policy Context

1.5.1 The transportation elements of the LDO need to be undertaken in a consistent manner to take account of other development proposals, policy background, and the strategy for development within Sedgemoor district and Somerset county. It is therefore important that the development generally accords with appropriate national and local transport policy.

National Planning Policy Framework (2021)

1.5.1 The revised National Planning Policy Framework (NPPF) was published in July 2021 and replaced the 2019 edition of the NPPF. The presumption in favour of sustainable development remains the core objective of the NPPF (paragraph 10 states that "*so that sustainable development is pursued in a positive way, at the heart of the Framework is a presumption in favour of sustainable development*").

1.5.2 To promote sustainable transport, paragraph 110 states that "*in assessing sites that may be allocated for development in plans, or specific applications for development, it should be ensured that:*

- *appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;*
- *safe and sustainable access to the site can be achieved for all users; and*
- *any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree."*

1.5.3 Additionally, paragraph 113 of the NPPF states "*all development that generate significant amounts of movement should be required to provide a travel plan, and the application should be supported by a transport statement or transport assessment so that the likely impacts of the proposal can be assessed.*"

1.5.4 In Section 9 'Promoting sustainable transport', paragraph 104 states that "*transport issues should be considered from the earliest stages of plan-making and development proposals, so that:*

- *the potential impacts of development on transport networks can be addressed;*
- *opportunities from existing or proposed transport infrastructure, and changing transport technology and usage, are realised – for example in relation to the scale, location or density of development that can be accommodated;*
- *opportunities to promote walking, cycling and public transport use are identified and pursued;*
- *the environmental impacts of traffic and transport infrastructure can be identified, assessed and taken into account – including appropriate opportunities for avoiding and mitigating any adverse effects, and for net environmental gains; and*

- *patterns of movement, streets, parking and other transport considerations are integral to the design of schemes and contribute to making high quality places".*

1.5.5 Paragraph 111 of the NPPF states "*development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe*."

National Planning Practice Guidance, 2014: Travel Plans, Transport Assessments and Statements

1.5.6 The National Planning Practice Guidance[1] (NPPG) provides the overarching framework within which the transport implications of development should be considered. It provides advice on the preparation of Transport Assessment, Transport Statements and Travel Plans. The key advice is as follows:

'*Travel Plans, Transport Assessments and Statements are all ways of assessing and mitigating the negative transport impacts of development in order to promote sustainable development. They are required for all developments which generate significant amounts of movements*.' (Paragraph 2).

1.5.7 The key principles within which Transport Assessments should be undertaken are detailed as follows:

"Travel Plans, Transport Assessments and Statements should be:

- *proportionate to the size and scope of the proposed development to which they relate and build on existing information wherever possible;*
- *established at the earliest practicable possible stage of a development proposal;*
- *be tailored to particular local circumstances (other locally-determined factors and information beyond those which are set out in this guidance may need to be considered in these studies provided there is robust evidence for doing so locally);*
- *be brought forward through collaborative ongoing working between the local planning authority/ transport authority, transport operators, rail network operators, Highways Agency where there may be implications for the strategic road network and other relevant bodies. Engaging communities and local businesses in Travel Plans, Transport Assessments and Statements can be beneficial in positively supporting higher levels of walking and cycling (which in turn can encourage greater social inclusion, community cohesion and healthier communities)'.*

1.5.8 The guidance emphasises the importance to consult with the relevant local authorities at the outset in order to scope the transport assessment work, on the basis of the principles highlighted above.

Decarbonising Transport, A Better Greener Britain, 2021

1.5.9 The Department for Transport (DfT) published 'Decarbonising Transport, A Better Greener Britain' in 2021.

1.5.10 This plan follows on from 'Decarbonising transport: setting the challenge', published in March 2020, which laid out the scale of additional reductions needed to deliver transport's contribution to legally binding carbon budgets and delivering net zero by 2050.

[1] https://www.gov.uk/guidance/travel-plans-transport-assessments-and-statements

1.5.11 This plan sets out the government's commitments and the actions needed to decarbonise the entire transport system in the UK. It includes:

- a pathway to net zero transport in the UK.
- the wider benefits net zero transport can deliver.
- the principles that underpin our approach to delivering net zero transport.

1.5.12 However, given the rate of technological advancement and uncertainty in the precise mix of future zero emission solutions, and the probability of significant changes in travel behaviour over the years ahead, this plan does not precisely plot each individual step to fully decarbonising transport modes over the next 30 years. It does however set out a series of actions and timings that will decarbonise transport by 2050 and deliver against carbon budgets along the way, whilst also responding to the challenge of the COVID-19 pandemic in the process.

1.5.13 The strategic priorities identified for achieving net zero are confirmed as:

1. Accelerating modal shift to public and active transport
2. Decarbonising road transport
3. Decarbonising how we get our goods
4. UK as a hub for green transport technology and innovation
5. Place based solutions to emissions reduction
6. Reducing carbon in a global economy

Bus Back Better, National Bus Strategy for England, 2021

1.5.14 In September 2019, the government set out how it would launch a revolution in bus services, in other words, delivering a better deal for bus users and committing to publishing a National Bus Strategy.

1.5.15 In February 2020, the Prime Minister announced that bus services across the country would be transformed with simpler fares, thousands of new buses, improved routes and higher frequencies.

1.5.16 The DfT published Bus Back Better, National Bus Strategy for England in 2021.

1.5.17 This national strategy sets out the vision and opportunity to deliver better bus services for passengers across England, through ambitious and far-reaching reform of how services are planned and delivered.

1.5.18 The vision is defined as *'to get bus use back to what it was before the pandemic. Then we want to increase patronage and raise buses' mode share. We can only do these things by ensuring that buses are an attractive alternative to the car for far more people'.*

1.5.19 The vision is to be achieved by making buses:

1. More frequent
2. Faster and more reliable
3. Cheaper
4. More comprehensive
5. Easier to understand
6. Easier to use
7. Better to ride in
8. Better integrated with other modes and each other

9. Greener
10. Accessible and inclusive by design
11. Innovative
12. Seen as a safe mode of transport

1.5.20 It is expected that all Local Transport Authorities (LTA) will publish a local Bus Service Improvement Plan (BSIP). These new plans must set out how they will use their Enhanced Partnership or franchising scheme to deliver an ambitious vision for travel by bus, meeting the goals and expectations in this strategy and driven by what passengers and would-be passengers want in their area.

1.5.21 Bus Back Better in Somerset County Council (SCC) are in the process of drafting a BSIP in collaboration with the County's bus and community transport operators, which is intended to incorporate feedback obtained from a public engagement process which has been undertaken. The research findings indicated the following top priorities:

1. Additional and clearer bus service information
2. Additional bus routes and higher frequencies including enhanced weekend timetables
3. Wider network connectivity / strategic enhancement
4. Better integration with rail and other modes of transport
5. Cheaper and simplified fares

1.5.22 The BSIP will be submitted by SCC to the DfT in October 2021 with a view to achieving agreement and completion by April 2022.

Sedgemoor Local Plan 2011 – 2032

1.5.23 The Sedgemoor Local Plan 2011-2032 sets out how the district will grow and develop into the future. It includes the vision, priorities and policy framework for future development in the district, including addressing the requirements relating to housing, employment, retail and other facilities and infrastructure.

1.5.24 The Local Plan priority stated in paragraph 3.3 is "*To ensure development in Sedgemoor supports the principles of sustainable development and delivers sustainable communities whilst respecting the diversity in function and character of Sedgemoor's towns, villages and countryside.*"

1.5.25 Strategic priorities include:

a. To deliver development that is of high quality, sustainable, distinctive, inclusive, safe and respectful of its context.

b. To promote safe and sustainable transport options and manage congestion.

1.5.26 Policy S3 Infrastructure Delivery states that, *"New development will be required to provide and contribute towards the provision of services, facilities and infrastructure at a rate, scale and pace to meet the needs and requirements that are expected to arise from that development. All new development that generates a demand for infrastructure will only be permitted if the reasonable and necessary on and off-site infrastructure required to support and mitigate the impact of the development is provided."*

1.5.27 Policy B16 Transport states that, "*Proposals that provide opportunities for cycling, walking and enhanced public transport both within the town and between key destinations including Taunton and Burnham (A38 corridor), Street and Minehead (A39 corridor) and the town's surrounding rural areas will be supported".*

1.5.28 Policy D13 Sustainable Transport and Movement states that *"Travel management schemes and development proposals that reduce congestion, encourage an improved and integrated transport network and allow for a wide choice of modes of transport as a means of access to jobs, homes, leisure and recreation, services and facilities will be encouraged and supported. Proposals will:*

a. Support the travel improvements identified in the Somerset Future Transport Plan (transport policies, implementation plan and modal strategies), Infrastructure and Delivery Study and Sedgemoor Transport Strategy (when published);

b. Be compatible with the existing transport infrastructure or, if not, provision shall be made where necessary for improvements to infrastructure to enable development to proceed;

c. Contribute to reducing adverse environmental issues, including air, light and noise pollution, vibration and surface water run-off, through appropriate mitigation measures, including tree planting along road corridors for shade, amenity and air quality;

d. Enhance road and personal safety;

e. Enhance the facilities for pedestrians, cyclists, those with reduced mobility and other users;

f. Develop innovative and adaptable approaches that deliver higher quality and accessible public transport options;

g. Encourage efficient, safe and sustainable freight transport; and

h. *Be resilient to climate change."*

1.5.29 Policy D14 Managing the Transport Impact of Development of the Local Plan states that, *"Development proposals that will have a significant transport impact should:*

a. Be supported by an appropriate Transport Assessment, Air Quality Assessment, Noise and Vibration Assessment and Ecological Surveys where there are significant implications;

b. Engage at an early stage with relevant bodies such as the Sedgemoor District Council (SDC), Somerset County Council (SCC), National Highways (NH, formerly known as Highways England) and Network Rail (NR) regarding the proposal and scope of supporting information required;

c. Include an appropriate Travel Plan outlining how the development will manage transport impacts and encourage more sustainable modes of travel;

d. Ensure provision is made for inclusive, safe and convenient access for pedestrians, people with disabilities, cyclists and users of public transport that addresses the needs of all;

e. Provide safe access to roads of adequate standard within the route hierarchy;

f. Ensure that the expected nature and volume of traffic and parked vehicles generated by the development would not compromise the safety and/or function of the local or strategic road networks in terms of both volume and type of traffic generated;

g. Comprehensively address the transport impact of development and appropriately contribute to the delivery of the necessary transport infrastructure;

h. Not prejudice existing and new safeguarded transport infrastructure (sites and routes) as shown on the Local Plan Policies Map;

i. Enhance and develop rights-of-way as a means of managing transport impacts of development and should not reduce the convenience and safety of existing rights-of-ways, bridle paths and cycle paths, unless suitable alternative routes are provided;

j. Ensure car parking and vehicle servicing at levels appropriate to the development and in accordance with the parking standards detailed within the Somerset County Council Parking Strategy; and

k. Adequately assess and provide any required improvements to level crossings where development may result in a material increase in pedestrian and/or vehicular use of a level crossing, in consultation with Network Rail".

SCC Travel Planning Guidance (2011)

1.5.30 The SCC '*Travel Planning Guidance*' document was adopted in 2011, and as an SPD, sets out a series of standards tied to the Council's '*Future Transport Plan'* to "*aid the delivery of travel plans through the planning process in Somerset*".

1.5.31 The SCC document seeks to:

"*ensure that proposed developments contribute to modal shift;* [define] *the expected content of travel plans; aims to ensure that good quality cycle parking and other on-site physical facilities effectively support new development,* [set out] *a consistent process for the delivery of promised travel plan outcomes; and* [describe] *the overall process for efficient and predictable decisions for the development industry*".

Transport Investment Strategy 2050

1.5.32 The Transport Investment Strategy 2050 (TIS) identifies the key transport schemes required to support economic growth and new housing in Sedgemoor, whilst aligning transport infrastructure with development to achieve long-term, sustainable growth to 2050. The Strategy considers all modes of travel across all areas of Sedgemoor, as well as connections to and from the district. It also considers the opportunities of new and so-called disruptive technologies in transport such as on-demand and shared mobility. The TIS builds on the Sedgemoor Local Plan 2011-2032, identifying additional infrastructure requirements to support development beyond 2032 or even to accelerate development.

1.5.33 The vision of the TIS is to support the delivery of a low carbon, clean growth transport network for the future that creates opportunities for all by improving the day-to-day accessibility and connectivity for Sedgemoor's residents, businesses, and visitors.

1.5.34 In specific reference to Gravity, paragraph 2.20 states *"The Enterprise Zone at the former Royal Ordnance Factory is one of a very few locations within Sedgemoor with capacity to accommodate large scale requirements emerging from the Hinkley Point C supply chain and growth related to other industrial sectors. Traffic accessing the site is expected to increase volumes on the A39, A38 and B3141. The planned innovation campus will be one of the South West's largest commercial locations when fully built out as Gravity is expected to generate around 4,000 skilled jobs on site. The additional output generated by the Gravity Site will effectively double Sedgemoor's current economic growth rate over a 25-year period. Gravity has the potential to change the above figures from the Trip End Model and provide a centre for knowledge-intensive jobs for Sedgemoor residents as well as attracting workers from outside the district."*

1.5.35 Within the TIS several interventions and initiatives are set out to improve journeys across Sedgemoor. The interventions relating to Gravity are briefly set out below:

a. *R3 Gravity Rail Link – Providing a direct rail link for passengers and freight towards Highbridge & Burnham station from Gravity.*

b. *Policy HW3 and Dunball – Increased capacity across the junctions and further signalisation to prevent increases in traffic resulting from forecast growth from interfering with the operation of the Dunball roundabout and the M5 slip roads.*

c. *HW1 Smart Motorway – The District will be seeking full implementation of Smart Motorway infrastructure along the M5 corridor, which increases capacity and has the potential to reduce congestion and delays and improve reliability and resilience.*

d. *PT1 High frequency bus services to Gravity – seen as key to the successful and sustainable integration of the enterprise zone into the local labour market will be a high-quality, high frequency bus service linking Gravity to surrounding settlements.*

e. *WC1, WC2, WC3 Walking and cycling links from Burnham-on-Sea and Bridgwater to Gravity - As the site approaches first occupation, there is a need for a high quality walking and cycling connection between Gravity and Highbridge and Burnham-on-Sea (WC1).*

f. *SM1 Smart mobility at Gravity - Gravity has the potential to build on local business and infrastructure assets to be a test-bed of innovative developments in the field of mobility, including Connected and Autonomous Vehicles.*

g. *EV1 Electric vehicles – Sedgemoor will support the transition to cleaner fuels in two ways. Firstly, through the provision of publicly available, easy-to-use and widely distributed electric vehicle (EV) charging infrastructure. Secondly, through the planning system, developers will be encouraged to provide fast charging infrastructure for all forms of electric transport in domestic, commercial and public areas throughout Sedgemoor.*

Summary

1.5.36 A full review has been undertaken to identify the national and local transport and planning policies and guidance that are most applicable to Gravity. It is concluded that Gravity is in alignment with planning for sustainable development, and thus the objectives of current national and local transport policy.

1.6 Purpose of the FTP

1.6.1 This FTP will be central to achieving the overarching development vision at Gravity for clean and sustainable growth and is one of several key transport mitigation measures to be incorporated into the LDO Mitigation Checklist, against which all future LDO Compliance Applications will be assessed.

1.6.2 This FTP provides a flexible framework which can be adapted to make best use of future technological change and innovation and to support future occupiers in achieving net zero outcomes; whilst providing a transparent and viable approach to support delivery of the site vision and allowing a package of measures / interventions to be tailored to each end user / occupier.

1.6.3 This FTP sets out the overall travel demand management strategy and framework for the Proposed Development. The purpose of this FTP is to provide a core framework of potential measures that can be implemented at the Site to encourage more sustainable travel and reduce single occupancy private vehicle use associated with all activities at Gravity.

1.6.4 In this context, this FTP provides an over-arching strategy at Gravity, from which more occupier specific initiatives will operate for the individual residential and workplace occupiers, through the development of individual, site-specific Workplace and Residential Travel Plans. This Framework Travel Plan will be used as a basis to inform the development of future Individual Site-Specific Travel Plans.

1.6.5 This FTP outlines a holistic group of 'hard' and 'soft' measures designed to encourage sustainable travel to and from the Proposed Development and to reduce the use of private vehicles from the outset. Through this approach, take up of measures such as the use public transport, walking and cycling facilities as well as car sharing and emerging micro-mobility would be optimised through promotion and possible incentives to the large target audience.

1.6.6 Best practice guidance suggests that an FTP is pertinent for mixed-use developments or developments where there are several different organisations and/or occupiers.

1.6.7 Given the nature of an LDO, there remains significant uncertainty on the final scheme details and end occupier(s). The purpose of this FTP is therefore to:

- Outline a package of measures that are likely to be implemented, although the final details of which will inevitably need to be tailored to end occupiers when known.
- Demonstrate that managing travel demand by maximising sustainable travel options at this site is embedded within the site design (Design Guide) and development approach.
- Propose a Monitor and Manage approach which will track multi modal trips to inform future adjustments to the investment in sustainable modes, whilst also tracking peak period vehicle trip generation to provide SCC / NH assurances regarding the peak period operational performance on the highway network.

1.7 Purpose of Individual Site-Specific Travel Plans

1.7.1 Whilst the FTP provides the overarching strategy and Travel Plan for the whole of the Proposed Development, specific initiatives will be developed within Individual Travel Plans, tailored to reflect development plots and occupiers associated with future LDO Compliance Applications – but still reflecting the strategy and commitments defined with the FTP.

1.7.2 Workplace Travel Plans will be prepared for the core employment use occupiers, and these will be 'destination' Travel Plans focusing primarily on commuter travel during the course of a working day, although visitors to the site will also be part of the plan. All occupiers will be required to partake in the Travel Plan process, and this will be outlined as part of any future LDO Compliance Application(s). The precise requirements will vary according to the size of the occupier and/or the area occupied, and will reflect national and local guidance.

1.7.3 A Residential Travel Plan will be required for the proposed residential uses and will differ from the workplace 'destination' Travel Plans as it is designed to encourage more sustainable travel from the origin of journeys and across the full range of journey purposes, focussing on travel by residents in housing developments. As different parcels of residential land within the Proposed Development may have slightly different tenant/occupier profiles, plans may be adapted as the development is implemented to reflect this but will be based on an agreed series of measures reflecting national and local guidance. and outlined as part of any future LDO Compliance Application(s).

1.7.4 The Individual Site-Specific Travel Plans will include a range of measures that aim to influence positively travel patterns to assist in the delivery of sustainable transport. These measures are aimed at influencing choice of travel modes, with an emphasis on reducing reliance on single occupancy car travel. The broad aims and objectives of the Travel Planning process are as follows:

- To reduce reliance on the private car and single occupancy car use.
- To build upon good urban design principles that maximise the permeability of the development for promoting walking, cycling, micro-mobility and public transport use.
- Ensuring strong connectivity with the Puriton and Woolavington villages and also to Bridgwater, including the Bridgwater Train Station.
- To promote healthy lifestyles and sustainable, vibrant local communities.

1.7.5 Details of individual travel plan requirements are provided by land use within **Section 7** of this FTP.

1.7.6 It is anticipated that each occupier will produce and submit a full individual Travel Plan to SCC within three months of occupation. At this stage the anticipated number of occupiers and occupation date is unknown, however further information will be provided to SCC as part of any future LDO Compliance Application(s).

1.7.7 Travel planning across the development is expected to be secured by inclusion within the LDO Mitigation Checklist, with any future LDO Compliance Application(s) requiring review of and conformity with the FTP as well as the preparation of occupier specific individual Workplace and/or Residential Travel Plans.

1.8 Delivery Against Aims and Objectives

1.8.1 The Development is committed to the delivery of the aims and objectives by a combination of:

- Providing complimentary land uses to reduce the need to travel ‘off-site’ through carefully designed land-use provision and location where possible within the parameters of the LDO.
- Creating an inherently and holistically sustainable form of development; to build upon good urban design principles that increase the permeability of the development for promoting walking, cycling, micro-mobility and public transport use.
- Encouraging the use of non-car modes of transport; to promote the use of walking, cycling and public transport.
- Focussed travel demand management measures; to reduce the overall reliance on the private car for all trip purposes and car parking availability with a long-term strategy of mode shift away from single occupancy car use against present day proportions.

1.9 Report Structure

1.9.1 This report is structured as follows:

- Section 2 – Reviews the existing transport conditions around the site including the local highway network, existing pedestrian, cycling, and public transport facilities.
- Section 3 – Provides further information and evidence on emerging future travel trends.
- Section 4 – Outlines the scope and scale of the Proposed Development, provides details on the vision and ambitions for the Site, and sets out the broad approach to developing the Gravity Transport Strategy and supporting package of key transport measures proposed.
- Section 5 – Outlines the aims and objectives of the FTP.

- Section 6 – Outlines provisional Mode Share Targets, with reference to travel demand calculations reported more fully within the TA whilst recognising that these will need review when future occupier(s) have been identified.

- Chapter 7 – Provides guidance for future occupiers including clear advice on the requirements of future Workplace and Residential Travel Plans.

- Chapter 8 – Describes the proposed FTP implementation strategy and a toolkit of measures that can be implemented.

- Chapter 9 – Describes the ongoing management, monitoring and review process including possible funding mechanisms.

2 Baseline Transport Conditions

2.1 Introduction

2.1.1 This chapter provides a description of the site location, local facilities and a review of the existing pedestrian, cycle and public transport facilities and services in the immediate area.

2.1.2 In addition, this chapter also provides a summary of the baseline transport data used to understand the existing operation of the local highway network surrounding the site.

2.2 Site Access

2.2.1 The Site benefits from an established access onto Woolavington Road in the form of Y-shaped twin priority junctions where the Eastern and Western Approach Roads link to form a single point of entry to the 37 Club and main site. A secondary vehicular access connects the site with the B3139 to the east.

2.2.2 Both Woolavington Road and the B3139 Causeway in the vicinity of the site are rural in character and considered sub-standard in part along its length in terms of general alignment, forward visibility and highway capacity. To this end the current access arrangements were not considered suitable to provide the main strategic access to support the Extant Consent.

2.2.3 As such, the Extant Consent included the construction of a new link road and junctions linking the development to the A39 Puriton Hill, whilst also providing direct access to the M5 motorway via Junction 23 and the A38 via Dunball Roundabout. A general arrangement drawing of the Gravity Link Road scheme is provided in **Appendix A**.

2.2.4 Therefore, several transport related elements of the Extant Consent in relation to access are scheduled to be completed in October/November 2021:

- New main site access roundabout on Woolavington Road.
- Gravity Link Road access directly from the Woolavington Road site access roundabout onto the A39 Puriton Hill to the south and the associated new roundabout / improvements to the A39 junctions with Hillside and Hall Road.
- A new ‘green bridge’, connecting Puriton with the land to the south along a Public Right of Way (PROW) known as public footpath BW 28/2 which is being retained.

2.2.5 Whilst the principle function of the Gravity Link Road is to provide a strategic access to the Site, it will also provide many additional local benefits including:

- The provision of access, highway and safety improvements at the existing junctions of Hall Road, Old Puriton Hill and Hillside.
- Restriction of HGV traffic through Puriton and Woolavington villages.
- Reduced through traffic movement in Puriton.
- Facilitate public realm and complementary traffic management measures in Puriton and Woolavington villages, and along Woolavington Road.
- Improved connectivity, accessibility and general safety for pedestrians and cyclists and public transport users.

2.2.6 In addition to delivery of the Gravity Link Road, an improvement of Junction 23 of the M5 to provide increased traffic capacity has been completed and enhanced beyond what was required for the Extant Consent.

2.3 Local Facilities

2.3.1 Within the immediate vicinity of Gravity are the villages of Puriton and Woolavington. There is Court Farm Butchers in Puriton, located on Riverton Road, which also provides grocery needs, and Co-op Food on Woolavington Hill, with both shops providing day-to-day convenience goods for local residents. A post office is also located on Middle Street within the centre of Puriton. The nearest supermarkets to the villages are in Bridgwater, with Budgens situated adjacent to Bristol Road or Sainsburys accessed from The Clink.

2.3.2 The Woolavington Branch Surgery is located in Woolavington off Woolavington Road to the east of the current site access. Bridgwater Hospital is located on the north eastern edge of Bridgwater and has an Accident and Emergency centre. The nearest dental facility is 'myDentist' located on Symons Way, Bridgwater.

2.3.3 There are primary schools located in both Puriton and Woolavington. Puriton Primary School is accessed via Rowlands Rise, which contains wide footways on both sides of the carriageway. Woolavington Village Primary School is located on the southern side of Higher Road, has limited car parking facilities and is only served by footways to the east. The closest secondary schools are Chilton Trinity and Bridgwater College Academy, both of which are located within Bridgwater.

2.3.4 The National Cycle Network Route extends to the east of Woolavington and north of the site to Highbridge and is accessible via Cossington Lane. Furthermore, Puriton Sports Centre and the 37 Sports and Social Club can be accessed via Batch Road and Woolavington Road respectively.

2.3.5 Note that the Gravity Campus itself will provide a range of services and amenities on site, catering for both employees, residents and visitors alike.

2.4 Walking and Cycling

2.4.1 The Site lies within open countryside between the villages of Puriton and Woolavington. The semi-rural location is reflected in the current accessibility of the site to local facilities and services within reasonable walk distance. Bridgwater provides the nearest settlement for access to higher order facilities and services.

2.4.2 The footway network reflects the rural character of both villages of Puriton and Woolavington. Footway provision sometimes lacks consistency with narrow or no footway in places, with one formal crossing point in each village. However, the Village Enhancement Schemes (VES) to be delivered as part of the Extant Consent (discussed below) will help to address some of these local connectivity issues within and between the two villages.

2.4.3 There are no formal cycle paths in the immediate vicinity of Puriton and Woolavington, however National Cycle Network Route (NCNR) 3 runs under A39 Bath Road adjacent to Woolavington Hill and later connects to NCNR 33, which runs to the east of Woolavington and beyond into Highbridge.

2.4.4 There is currently an absence of formal footways or cycleways adjacent to Woolavington Road, therefore access by these modes between the site and the local villages of Puriton and Woolavington where there are some local facilities available could be improved. The proposed Village Enhancement Scheme addresses these local connectivity issues within and between the two villages.

2.4.5 There is a single PROW that crosses the Proposed Development: the Gravity Link Road crosses the alignment of public footpath BW 28/2 and this has been considered and appropriately incorporated into the associated Gravity Link Road designs with the provision of a new green bridge to retain this existing connection.

2.4.6 Additional PROWs that run adjacent to the site and remain unaffected by the Proposed Development include public footpaths BW 37/2 and BW 28/4; public bridleway BW 28/1; and restricted byway 28/1/1.

Puriton

2.4.7 Pedestrian footways are provided on at least one side of the carriageway for the length of Hall Road, which also includes a pedestrian crossing adjacent to the Village Hall bus stop prior to forming Riverton Road. Level and adequately surfaced footways then continue on at least one side of the carriageway through Puriton, with dropped kerbs and tactile paving at crossing points such as Rowlands Rise and the Butchers Shop.

2.4.8 Puriton Primary School is accessed via Rowlands Rise, which has wide and well surfaced footways on both sides. Between the Butchers Shop and Hillside the footway on the eastern side of the carriageway is narrow and there is no footway on its western side.

2.4.9 Hillside is served by footways on at least one side of the carriageway until Cypress Drive. However, during a short section of the AM peak it experiences high levels of on street parking linked to the Primary school drop off.

2.4.10 Woolavington Road, east of Hillside, is served by wide footways on at least one side of the carriageway with dropped kerbs and tactile paving at informal crossing points. The footways end to the east of Puriton Park.

Woolavington

2.4.11 There is currently only one formal pedestrian crossing point on Woolavington Hill B3141 prior to the junction with Higher Road and Vicarage Road. However, there are several informal dropped kerb pedestrian crossing points, but these do not have tactile paving.

2.4.12 To the west of Lynham Close, there are no footways on either side of the road along Woolavington Road. To the east, there is a footway on the northern side of the carriageway until Chertsey Close, where a crossing with tactile paving is provided to the footway on the southern side of Higher Road, which continues to the junction with Woolavington Hill, except for a section in front of Woolavington Village Primary School. A crossing with tactile paving is provided by 'The Green' bus stops.

2.4.13 Along Woolavington Hill, south of the junction with Higher Road, there are footways provided on both sides of the carriageway. The footways continue until the southern junction with Old Mill Road where a footway is only provided on the eastern side of the carriageway, until the footway comes to an end at Cossington Lane.

2.4.14 Along the B3141, north of the junction with Higher Road footways are provided on at least one side of the carriageway for the majority of the route, except for a short section south of the junction with Church Street. The footways provided are narrow in parts along Lockswell with limited crossing points.

Village Enhancement Scheme Overview

2.4.15 The Section 106 Agreement for the Extant Consent includes the requirement to deliver a VES within and between the villages of Puriton and Woolavington as additional works to construction of the Gravity Link Road.

2.4.16 Following a public consultation event held in March 2020, a VES scheme has been developed and has achieved planning consent under planning reference 42/20/00022. Technical approval submissions are to be made prior to scheme delivery. The Extant Consent Section 106 states that the VES shall be completed within 12 months after completion of the Gravity Link Road or within 6 months of commencement of the VES if earlier (unless agreed otherwise).

2.4.17 The VES will provide safe and sustainable connections between the villages of Puriton and Woolavington. The VES includes traffic calming measures and a new off-road shared foot / cycleway path between the two villages whilst connecting to the Site and the 37 Club.

2.4.18 The VES aims to provide a safe and attractive route for walking, cycling and micro-mobility modes of transport, reduce traffic speeds via traffic calming measures, and improve highway safety within the villages of Puriton and Woolavington. The measures will also encourage drivers to use the Gravity Link Road as the preferred route into the Site for vehicular traffic and encourage pass-by traffic to use this new link as an alternative to routing through Puriton.

2.4.19 A summary of the VES proposals is set out below for both Puriton and Woolavington villages.

Village Enhancement Scheme – Puriton Proposals

Puriton Hill / Hall Road

- As part of the Gravity Link Road scheme, there is a change in priority from Hall Road to Old Puriton Hill. This introduces a speed reduction measure and will encourage slower vehicle speeds. Hall Road will be enhanced to a northbound one-way layout with on-street parking and a deflection island.

- Tightened radii at the junction between Puriton Hill / Hall Road (on the western side of Hall Road) and an overrun area provided to reduce vehicle speeds and reduce pedestrian crossing time.

Hall Road / Riverton Road

- As part of the Gravity Link Road scheme, there is a change in priority from Hall Road to Old Puriton Hill.

- The Taylor Wimpey development on Green Acres has provided tightened geometry via a speed control bend, which will encourage lower speeds to the north.

Riverton Road

- In order to maintain low vehicle speeds and provide regular spacing of traffic calming measures on a bus route, speed cushions have been proposed at regular intervals.

Riverton Road / Newlyn Crescent / Rowlands Rise

- A raised table junction with tightened junction kerbing and crossings is proposed to accommodate the desire lines and promote pedestrian movement to Puriton Primary School and local centre. These proposals also fulfil need for the regular spacing of traffic calming measures to maintain low vehicle speeds.

Riverton Road / Woolavington Road

- A change to the surface colour is proposed on the ‘S’ bend to the east of Puriton local centre to alert drivers of potential hazards. A review was undertaken to provide a crossing in this location to accommodate desire lines to the local centre. However, due to existing

levels and third-party land constraints, there is no opportunity to provide a safe crossing point.

- The footway on the eastern side of Woolavington Road will be widened to 1.8 metres to increase accessibility to the local centre. Minimum carriageway and footway width will be maintained as part of proposals.

Hillside / Woolavington Road

- A raised table junction with crossings is proposed to encourage slower vehicle speeds and accommodate observed desire lines to Puriton Primary School and local centre.

- Traffic calming measures to the east on the bend along Woolavington Road have not been proposed as such measures would displace existing on-street parking.

Hillside / Cypress Drive

- A raised table junction is proposed between Hillside and Cypress Drive to encourage slower vehicle speeds on approach to Puriton Village and the connection to the Gravity Link Road.

Woolavington Road

- A raised table is proposed to the west of Manse Lane and proposed H-Bar markings to discourage parking on or adjacent to existing crossing, which will undergo refurbishments.

- A 3.5m pinch point is proposed to the east of Manse Lane, with priority control, incorporating crossing and widened footways, narrowing the carriageway to a single lane. Proposed give way road markings to the west form a priority control, which encourages slower speeds for eastbound traffic.

- The build out with a crossing to the east of Manse Lane is to be maintained to increase accessibility and encourage slower vehicle speeds.

- The existing bus stop is to be relocated further west to improve bus vehicle movement travelling east after the proposed pinch point, subject to discussions with Travel Somerset and bus companies.

- The existing flat top road hump located to the east of Spring Rise is to remain, which provides a connection to the footway along the northern side of Woolavington Road and encourages slower vehicle speeds.

- To the east of Puriton, speed cushions are proposed to the east of Canns Lane to encourage lower vehicle speeds and a raised table to the east of Puriton Park accommodates pedestrian movement and slows vehicle speeds westbound entering the village. Reduced bellmouth kerb radii at Puriton Park also encourages reduced vehicle speeds and reduces pedestrian crossing distance.

- A new footway will be provided to form a pedestrian link to Woolavington with the width ranging between 1.2 metres to 2 metres. The proposed footway will connect into shared foot/cycleway currently being constructed as part of Gravity access road works.

- Improvements to existing Puriton Gateway and a new ‘slow’ marking are proposed on the eastern entrance to the village.

Village Enhancement Scheme – Woolavington Proposals

Woolavington Road Gateway

- A new 'slow' marking is proposed to encourage slower speeds on the approach to Woolavington and an improvement to the existing Woolavington village entrance gateway with the change of speed limit signage is to be refreshed.
- A 3-metre shared foot / cycleway is proposed to link to Woolavington Road with cycle transition at the peak point of visibility on the north of the carriageway. Approximately 80m of hedgerow will be removed to accommodate footway / cycleway access and visibility splays.
- A built-out crossing and footway is proposed to link to existing public right of way and proposed shared footway / cycleway. The crossing point reduces the carriageway width and give way road markings to the west form a priority control, which encourages slower speeds and enables accessibility to Crancombe Lane and the wider Public Right of Way network.

Higher Road / Woolavington Village Primary School

- A flat top road hump is proposed to the west of the entrance to Woolavington Village Primary School to encourage slower vehicle speeds on approach to the school and promote use of the existing informal crossing points.
- A footway is proposed across the front of Woolavington Village Primary School, which include new crossing points with tactile paving.
- A raised table junction with crossings is proposed to the east of Woolavington Village Primary School between Higher Road and The Drive. This proposal accommodates observed desire lines to the school and will encourage slower vehicle speeds on approach to the school.
- Speed cushions are proposed to the east of Crancombe Lane adjacent to The Green to the west of existing bus stops to lower vehicle speeds through the regular spacing of traffic calming measures.

Higher Road / Causeway / Vicarage Road / Woolavington Hill

- To accommodate desire lines over The Green a new footpath is proposed, subject to land ownership.
- The existing zebra crossing on Woolavington Hill will be incorporated into a flat top road hump to encourage slower vehicle speeds.
- Speed cushions are proposed to maintain existing low vehicle speeds and provide regular spacing of traffic calming measures along Causeway to the north of the junction.
- Chicane barriers are proposed on the footway to the western side of the carriageway, along with improved crossing facilities providing access to the existing bus stop, which will have new bus cage markings and high access kerbs.

B3141 Causeway

- The existing Woolavington Gateway and is to be refreshed as part of proposals associated with the change of speed limit are to be refreshed and improved as part of proposals.

- Speed cushions are proposed south of the gateway and existing speed limit road markings along Causeway on the northern edges of the village will be refreshed and improved to reduce and maintain low speeds and provide regular spacing of traffic calming measures.

Causeway / Lower Road / Church Street / Lockswell

- A flat top road hump is proposed incorporating an existing crossing to the north of Causeway / Lower Road junction, which is to encourage slower vehicle speeds and accommodate desire lines.
- Contrasting surface colour treatment could be introduced to Causeway's intersections between Lower Road, Church Street and Lockswell.
- Improved informal crossing facilities are proposed across Church Street and a new crossing provided along Lockswell
- A new section of footway is proposed to connect the existing footway north of Church Street to the existing footway along Lockswell.
- Speed cushions are proposed to the south of the proposed surface treatment area along Lockswell.

Woolavington Hill

- Existing build outs will be refreshed to improve awareness as part of proposals.
- Speed cushions are proposed to the north of the northern access of Old Mill Road.
- Old Mill Road northern junction radius will be tightened and include improved crossing facilities. A flat top road hump is also proposed on the southern side of the junction, which incorporates the existing crossing.
- Between the northern and southern access points of Old Mill Road, two new sets of additional speed cushions and the refreshment of a second existing build out are proposed.
- The Old Mill Road southern junction radius will be tightened and include improved crossing facilities. A flat top road hump is also proposed on the southern side of the junction, which incorporates the current crossing.
- Speed cushions are proposed further south of the Old Mill Road and Woolavington Hill junction.
- The southern Woolavington gateway feature will be improved and refreshed as well as the existing rumble strips on the entrance and exit of the village.

Village Enhancement Scheme – Shared foot/cycleway between Puriton and Woolavington

2.4.20 As part of the VES scheme proposals, a shared use foot/cycleway is also proposed between the villages of Puriton and Woolavington.

2.4.21 The proposed footway will tie into the Gravity Link Road at the Woolavington Road roundabout. Concrete steps with wooden handrails will provide a link to the access road with a new pedestrian crossing to the north of Woolavington Road roundabout.

2.4.22 The 3.5 metre foot/cycleway becomes a segregated route to the east of the roundabout before running to the north of the 37 Club and joining the existing entrance to the ROF site. The indicative route is shown on Drawing 43444/2025/122 attached at **Appendix B**.

2.4.23 The route will run on the field side of the hedge to the east of the existing access, on land entirely within Gravity ownership. To the east of the ROF entrance the foot/cycleway route mirrors the eastern approach road before running parallel to Woolavington Road, adjoining the road at the western gateway of Woolavington. The indicative route is shown on Drawing 43444/2025/123 attached at **Appendix B**.

2.4.24 Where the shared foot / cycleway meets the carriageway, the removal of vegetation and the location of the exit point on the bend is designed to accommodate maximum visibility splays for pedestrians and cyclists.

2.5 Public Transport

2.5.1 The data below relates to pre-Covid 19 travel restriction measures. Some bus services have reduced frequency during the pandemic, but it is expected that these will return to 2019 service levels in due course.

2.5.2 Bus stops through the centre of both villages are serviced by the 75 bus service from Wells to Bridgwater 7 times a day from 07:45 to 18:27. The 66 and X75 buses operate a singular daily service in each direction from Axbridge to Bridgwater College and Wells to Bridgwater College respectively, as shown in **Table 2-1**.

2.5.3 Recent on-site observations also identified that private school buses operated in the morning and afternoon peaks, servicing secondary schools outside of both Puriton and Woolavington.

2.5.4 Outside of the immediate vicinity of the Site, additional bus services are accessible from the A38 bus stops at Downend Road and Admirals Table, located approximately 2.5km and 2.8km respectively from the Site. From these stops, buses 21, 21A and 62 are available. Service 21 and 21A operate between Taunton and Highbridge and are accessible every hour. Service 62 is a school service between Bridgwater College and Weston-super-Mare, which operates one service a day in each direction.

Bus	Service	Frequency
66	Axbridge – Bridgwater College	1 school service a day in each direction
75	Wells – Bridgwater (loop)	7 services per day
X75	Wells – Bridgwater College	1 school service a day in each direction

Table 2-1 Local Bus Services

2.5.5 A wider range of bus services are available from Bridgwater Bus Station, which is accessed off Watsons Lane in central Bridgwater. **Table 2-2** shows the services available from the Bridgwater Bus Station.

Operator	Service	Frequency
Megabus UK / National Express	Bridgwater – Bristol	44 services a day
Megabus UK / National Express	Bridgwater – Plymouth	27 services a day
Megabus UK / National Express	Bridgwater – Heathrow	16 services a day
National Express	Bridgwater – Birmingham	10 services a day
Megabus UK / National Express	Bridgwater – Barnstaple	8 services a day
National Express	Bridgwater – Taunton	6 services a day

Table 2-2 Bridgwater Bus Station Departures

2.5.6 The Sedgemoor area is also covered by the SLINKY demand responsive service, operated by Mendip Community Transport under contract to SCC. This service operates between 09.00 and 18.00 on Monday to Friday and carries any passenger with a transport need, be it through disability or no access to conventional public transport. The service is operated with one wheelchair accessible minibus.

2.5.7 The Site is situated east of the mainline railway between Highbridge & Burnham and Bridgwater stations, and Gravity has an aspiration to connect the site with the railway by the reinstatement of a spur which was removed in the 1990's to facilitate both passenger and rail freight services. NR have confirmed that reopening of the spur would be feasible.

2.5.8 The closest operational railway station to the site is Bridgwater Station, located on the Taunton to Bristol mainline. The station itself is located in Bridgwater town centre on Wellington Road, approximately 7km from the Site. The station has recently been refurbished under the SDC Celebration Mile scheme and consists of a ticket office, car park for 36 cars operated by APCOA, cycle parking for 20 bikes, a taxi rank, collection points for pre-purchased tickets, toilets, CCTV and step free access to platform 1. The station provides hourly services to Taunton and Bristol Temple Meads, with 2 services per hour between 0600-0800 and 1900-2100.

2.6 Highway Network

2.6.1 The Site and both Puriton and Woolavington villages can be accessed via the A39 with Puriton on the eastern side of the M5 and Woolavington further to the east, with Woolavington Road connecting the two villages.

2.6.2 The A39 provides strategic connectivity to the M5 corridor providing access to Bristol within 45 minutes and other economic centres of Taunton and Exeter within approximately 15 minutes and 50 minutes respectively. M5 Junction 23 also provides easy access to the A38, which is part of the SCC Major Road Network, via the Dunball Roundabout.

2.6.3 M5 Junction 23 has been modified and upgraded to signal control through the mitigation agreed for the Hinkley C project to create additional capacity. The improvement works completed removes the need for the Extant Scheme to improve M5 Junction 23 in line with the

Section 106 obligation, and the capacity of the junction has already been increased in anticipation of the additional traffic that could be generated by the extant consent.

2.6.4 The village of Puriton is currently accessed from the A39 via Hall Road, Hillside (and previously Puriton Hill prior to construction of the Gravity Link Road). However, the Gravity Link Road will provide for a new roundabout access from the A39 joining with Puriton Hill, with Hillside forming a new junction onto the access road and stopped up at the former A39 junction. Hall Road will be limited to left turn in movements only from the A39. Hall Road leads on to Riverton Road, and then forms Woolavington Road at the junction with Middle Street and Rye. Woolavington Road aligns to the south forming a junction with Hillside and continues east to Woolavington approximately 2km from the centre of Puriton.

2.6.5 Woolavington Road provides the westerly access to Woolavington before forming Higher Road, which passes Woolavington Village Primary School. The centre point of the village is the crossroads between Higher Road / B3141 Causeway / Vicarage Road and Woolavington Hill. Causeway provides connections to East Huntspill and then Highbridge to the north.

2.6.6 Woolavington Hill provides the access to Woolavington from the south. Woolavington Hill forms junctions with Old Mill Road connecting to the residential area to the south west of the village. Woolavington Hill also connects to Cossington Lane, providing access to the small village of Cossington to the east and also continues south to the A39 Bath Road leading towards Street.

2.6.7 There are two existing traffic calming build outs on Woolavington Road; one located between the junctions with Old Mill Road, the other to the north of the junction with Combe Lane. The Gravity Link Road will connect the A39 directly to the Site via a new roundabout on Woolavington Road.

2.6.8 At the time of writing this TA, there are temporary highway works present on Woolavington Road which may include periodic temporary traffic light control at a location between the existing Eastern Approach access and Woolavington village. These are in place to allow short-term strategic improvements to electricity overhead cables to be carried out.

2.7 Summary

2.7.1 This section has demonstrated that excellent progress has been made through the part implementation of the Extant Consent and the completed upgrade of M5 Junction 23. SDC has also safeguarded funding for the planned upgrade of the A38 Dunball Roundabout and the improvement scheme is currently being reviewed.

2.7.2 As stated previously, several transport related elements of the Extant Consent in relation to access are scheduled to be completed and opened in October/November 2021:

- New main site access roundabout on Woolavington Road.
- Gravity Link Road access directly from the site access roundabout onto the A39 Puriton Hill to the south and the associated new roundabout / improvements to the A39 junctions with Hillside and Hall Road.
- A new ‘green bridge’, connecting Puriton with the land to the south along a PROW.

2.7.3 Whilst the principle function of the Gravity Link Road is to provide a strategic access to the Site, it will also provide a range of additional local benefits including:

- The provision of access, highway and safety improvements at the existing junctions of Hall Road, Old Puriton Hill and Hillside.

- Restriction of HGV traffic through Puriton and Woolavington villages.
- Reduced through traffic movement in Puriton.
- Facilitate public realm and complementary traffic management measures in Puriton and Woolavington villages, and Woolavington Road.
- Improved connectivity, accessibility and general safety for pedestrians and cyclists and public transport users.

2.7.4 Furthermore, the VES is scheduled to be delivered following the Gravity Link Road and will provide a safe and attractive route for walking, cycling and micro-mobility modes of transport, reduce traffic speeds via traffic calming measures, and improve highway safety within the villages of Puriton and Woolavington. The measures will also encourage drivers to use the Gravity Link Road as the preferred route into the Site for vehicular traffic and encourage pass-by traffic to use this new link as an alternative to routing through Puriton.

3 Emerging Evidence on Future Travel Trends

3.1 Introduction

3.1.1 There is a growing evidence base demonstrating a shift in travel behaviour as a consequence of disruptive technological and societal changes, in particular amongst the younger generations for whom a significant part of future development demand applies.

3.1.2 There is widespread evidence demonstrating that there is less reliance on the car from younger generations, aspiration to socialise or work while travelling, high costs of car ownership and change in priorities of spend (car not being a status symbol) all leading to a consensus that future travel behaviour will lead to lower levels of private car use.

3.1.3 This chapter provides an overview of a selection of key evidence documents that are underpinning these trends, including:

- Understanding the drivers of road travel: current trends in and factors behind road use (DfT, Jan 2015).
- Provision of Travel Trends Analysis and Forecasting Model Research (Atkins, AECOM and Imperial College London (2017).
- Young People's Travel – What's Changed and Why? Review and Analysis: Report to DfT (UWE, 2018).
- Research undertaken by Devon County Council and presented to the DfT (2018).
- A Time of Unprecedented Change in the Transport System, The Future of Mobility (Government Office for Science, January 2019).

Understanding the drivers of road travel: current trends in and factors behind road use (DfT, Jan 2015)

3.1.4 DfT research suggests that "*over recent decades growth in road traffic has been slowing*", and additionally indicates that "*car traffic has shown the greatest growth over the long-run but national levels are currently at the levels seen in 2002*."

3.1.5 As part of the 2015 report, the DfT have considered multiple factors affecting car use. Some of these include:

- Younger people not learning to drive due to the high cost of learning and car insurance, leading to a decline in car use in this demographic (based on NTS data)';
- Employment rates; a fall in 'real income' amongst younger people over the last decade has made driving cost-prohibitive, whilst employments rates among "females and older age groups", who are driving more, has increased;
- Traffic levels are shown to track and 'mirror' the changes in Gross Domestic Product;
- Declines in company car use have been found to account for the largest reduction in mileage amongst men between the ages of 30 and 60 and may also be linked with the decline of car use in London. DfT link this to changes in company car taxation rules;
- Urbanisation and increases in population density have been found to have brought down car demand in recent decades; and

- There is evidence to suggest that "increasing congestion in urban areas is contributing to the levelling of traffic in these areas, and that more people in these areas are travelling by public transport".

3.1.6 The report suggests also that "we may expect traffic in urban areas to grow less strongly, as… the availability of public transport services [keeps] traffic growth down, alongside more limited road capacity", and it additionally suggests that "public transport might be expected to continue becoming an increasingly important feature in these areas, whilst greater support and access to cycling… may encourage people to travel by other modes".

Provision of Travel Trends Analysis and Forecasting Model Research (Atkins, AECOM and Imperial College London (2017)

3.1.7 The report, which aimed to develop a forecasting model using statistical relationships identified in travel trends and drivers, cites evidence which suggests that:

- "Average trip rates have decreased between 1988 and 2010 for the majority of trip purposes", including commuting and leisure, and suggested that based on their analysis, it is "changes in walking trips and short trips… [which] have made a significant contribution to the overall observed trends in trip rates";

- Trip rates amongst all age groups except the 65+ age group have decreased, whilst the 65+ age group has increased only "slightly";

- Whilst annual car mileage has increased more amongst females and older age groups, there has been "a decline in distance travelled by car… predominantly [seen] amongst the young people and men"; and

- A comparison of 2001 and 2011 Census data has shown that "the proportions of workers categorised as 'working mainly at or from home' has increased by 1.4 percentage points to 10.6% in 2011".

3.1.8 The report therefore suggests that:

- "…reasons for changes in mobility patterns include the differential costs of motor insurance as well as learning to drive, which disproportionately accrue to younger age groups", which may have in impact on the number of people choosing to drive or own a car;

- "…an increase in the number of individuals who work from home regularly is linked to a reduction in the number of commuting trips made" and it is hypothesised that "using online social networks and online gaming substitute social travel to some extent", and;

- The overall decline in average trip rates may be mostly due to "changes in walking trips and short trips".

Research undertaken by Devon County Council and presented to the DfT (2018)

3.1.9 The DCC research suggests that the link between traffic growth and economic growth has been broken, and that there are significant changes amongst younger people whose propensity to travel by car has fallen, in men by some 47%. Whilst the older generation are generally travelling by car a little more, the trends amongst younger people away from the car might have very significant implications for future transport provision.

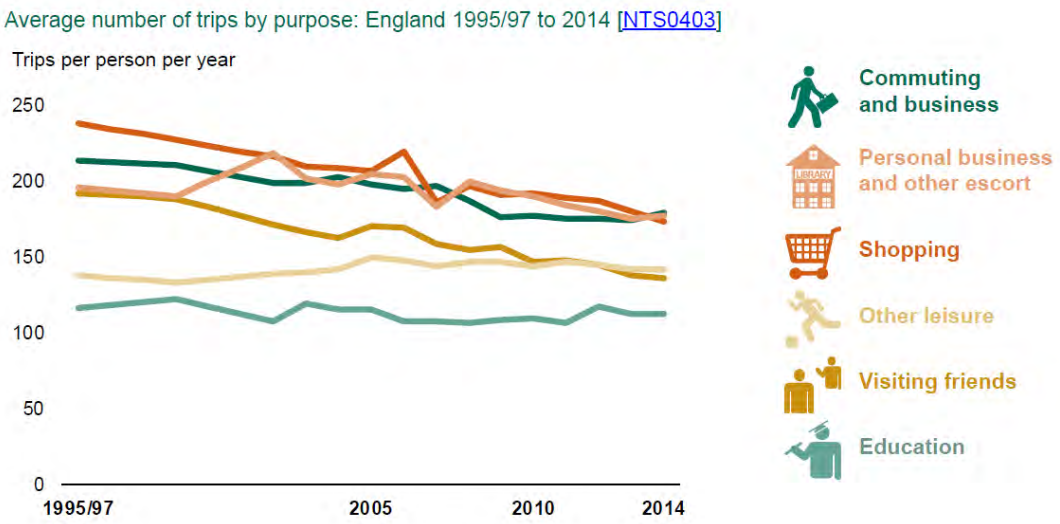


Figure 3-1 Average number of trips by purpose: England 1995/97 to 2014 (NTS)

3.1.10 The above research is therefore questioning the validity of current transport appraisal assumptions in forecasting future travel demands and traffic levels.

3.1.11 The research considers that there is a need to move away from the increasingly discredited traditional assessment approach by taking into account travel trends evidence, the capacity for the existing network to accommodate future growth, and wider transport interventions forming part of the JLP Transport Strategy. The anticipated outcome is that future traffic levels will be significantly lower than that forecast across the network using traditional approaches.

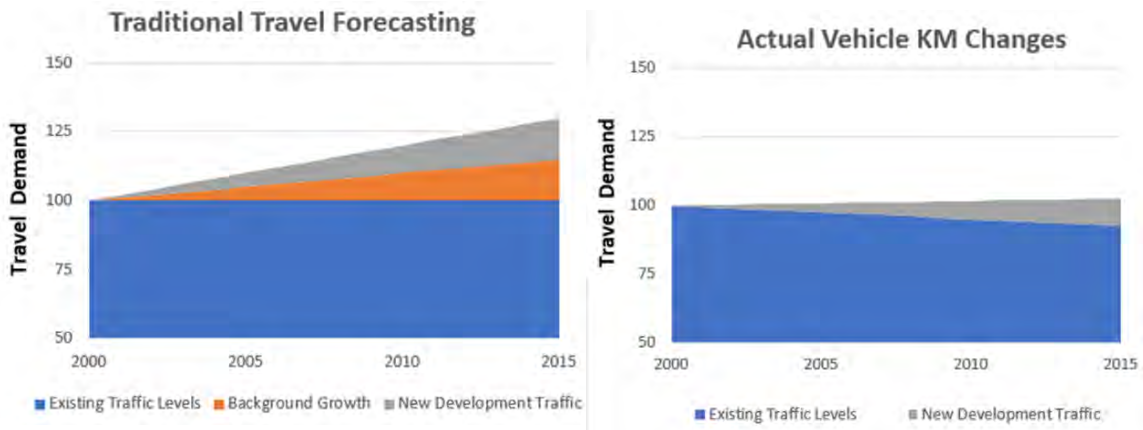


Figure 3-2 Traditional Travel Forecasting v Actual Vehicle KM Changes (Source: DCC, 2018)

Young People's Travel – What's Changed and Why? Review and Analysis: Report to DfT (UWE, 2018)

3.1.12 Research undertaken by the Centre for Transport & Society (UWE and University of Oxford) found that "*young adults* [ages 17-29] *in Great Britain and other countries are driving less now than young adults did in the early 1990s*", and that this change began approximately 25 years ago.

3.1.13 This is evidenced in that as of 2014, only 29% of 17-20 year olds and 63% of 21-29 year olds held a driving licence, representing a 19% and 12% decrease respectively. Additionally, it is cited that "*between 1995-99 and 2010-14 there was a 36% drop in the number of car driver trips per person made by people aged 17-29*".

3.1.14 The causes behind this change are hypothesised to be the prohibitive cost of motoring amongst younger people (linked in also with the "*stagnation in wage rates*" and decline in disposable income) as well as younger people accepting not driving, or their peers not driving, as evidenced by surveys and interviews.

3.1.15 Additionally, these decreases are linked to increases in "*time spent at home*", more young people are living in urbanised areas with public transport having a "*greater impact" on commuting choice*", and increased enrolment in higher education which may delay when younger people choose to own a car.

3.1.16 The report also suggests that whilst evidence of the impact of technology on travel behaviour is "*contradictory*", it remains a "*a plausible contributor to the fall in total travel by young people*" as well as changes to signifiers and understandings of 'adulthood'.

A Time of Unprecedented Change in the Transport System, The Future of Mobility (Government Office for Science, January 2019)

3.1.17 The report notes that "*we are currently travelling less at an individual level*", with a greater shift away from use of the private car amongst young people linked in part to changing economic situations, choices of where people live, and a "*greater openness to the sharing economy, which new technology will increasingly facilitate*".

3.1.18 Additionally, the report confirms that the different modes of transport are "*deeply interrelated: the increasing use of one often leads to a reduction in another*". Whilst it does add that "*the relationship…* [can] *be complementary*", it can be inferred that a shift towards more sustainable modes of transport to fulfil trip purposes (the most common of which are cited to be commuting and shopping) will in turn lead to a shift away from the private car.

3.1.19 The report therefore advocates for transport to be considered as a system, as well as "*exploring different futures, identify*[ing] *opportunities and help*[ing to] *mitigate the unintended consequences of new transport modes, technologies and/or trends*", and concludes that:

"*transport needs to be considered as a holistic system, not as sequential or separate elements. The 'predict and provide' principle that guided transport planning between the 1950s and 1990s tended to treat modes separately, but this will no longer suffice*".

3.1.20 The report states that "*there has been a general decrease in both trips and mileage (per person) for personal transport in rural, semi-urban and urban areas*", evidenced by a 12% decrease in car trips and distance travelled since 2002. Whilst it is noted that the factors influencing travel behaviour, both now and in future are "*too many to list*", key considerations include:

- The digitalisation of services, which will impact future mobility of passengers and businesses;
- Increased homeworking may reduce the need to travel;
- An ageing population who historically travel less and at different times to the working population, which will cause the "nature of travel demand to shift", whilst the younger cohort tend to also be travelling less;

- A sharp increase in car, bike and lift sharing, are predicted likely to grow further towards 2040;
- The influence of the built environment, i.e., people are more likely to walk and cycle if they are in proximity to local facilities and amenities that would otherwise necessitate car travel, i.e. shops, restaurants, schools, and
- Mobility as a Service (MaaS) could "support a move away from car ownership, potentially reducing congestion".

TRICS Guidance Notes

Changes in Travel Behaviour (August 2019)

3.1.21 TRICS Consortium Limited (TRICS) is responding to the fact that the world is experiencing significant change in relation to social, technological, economic and environmental drivers which in turn is creating new dynamics in travel behaviour and challenges for transport planning. In the face of deep uncertainty, the "predict and provide" paradigm that has framed transport planning processes is to give way to "decide and provide" paradigm – decide on the preferred future and provide the means to work towards that which can accommodate uncertainty.

3.1.22 The TRICS report includes a review of the National Travel Survey (NTS) 2016 and Road Traffic Forecasts 2018. The following is stated:

- The total distance travelled per person per year has fallen by 9% between 2007 and 2016. Distance by all motorised private transport has fallen by about 13% since 2003, and as a car driver by about 10% since 2007;
- Evidence from the NTS demonstrates vehicle trip rates have been declining over the last 20 years, with a reduction in trip rates of 13% since 2002; and
- Due to uncertainty around socio economic trends, the Road Traffic Forecasts assumes that young people reduce their licence holding acquisition compared to current levels and have extrapolated this trend in young people's licence holding up until 2050.

3.1.23 The TRICS report also sets out its own trend analysis dated May 2019. It states that there has been a 12% decline in vehicle trip rates (morning peak and all day) for residential development between 1989 and 2018.

3.1.24 The TRICS report further comments on the implications of the above evidence for TRICS. It states:

- "The evidence reviewed from All Change, the DfT RTF 18, NTS 2016 and the TRICS historic review demonstrates that there has been a sustained change in travel behaviour. This change is reflected in the trip rates for residential, retail (super food) and employment sites. Care need to be taken to ensure that the design of the residential and retail development, in particular, take account of these changes in travel behaviour";
- "If no recognition is given to the trends shown in the evidence from All Change and the DfT RTF18 report then it is inevitable that transport planning will continue to provide infrastructure that meets previous predicted needs rather than the transport needs of the future. This could lead to the over provision of highway capacity which in turn induces travel demand or the analysis could lead to the under provision of walking and cycling infrastructure or public transport services. The consequences are serious, and we run the risk of planning and developing stranded or underutilised assets"; and

- "The Business as Usual or "rear view mirror" approach, i.e. projecting past traffic growth trends and socio-economic trends to determine the need for infrastructure, in particular new roads and junction capacity has diminished relevance. The question becomes how to plan in light of the evidence of trends and the uncertainty that lies ahead. As change in travel behaviour continues, it is anticipated there would a need for a more flexible approach in adapting or providing new transport measures for the development".

Practical implementation of the Decide and Provide Approach (February 2021)

3.1.25 TRICs consortium has recently published a guidance note on the implementation of the 'Decide and Provide' approach, acknowledging the social, economic, environmental changes which in turn are changing travel behaviour and patterns. This change has been further impacted and future uncertainty amplified by the COVID-19 pandemic.

3.1.26 The guidance is split into two Parts, and Part 1, explains the background and reasons for the Decide and Provide approach and states, "*Decide and Provide" (D&P) is a planning paradigm that is vision-led, rather than forecast-led (Predict and Provide), and which aims to improve the resilience of planning decisions by taking account of deep uncertainty about the future1. At its heart is deciding on a preferred future and providing a development path best suited to achieving it"*

3.1.27 Chapter 4, Paragraph 4.4 states that, "*The risks associated with sticking with the P&P* [predict and provide] *approach need to be recognised and acknowledged. If we continue to reproduce past transport solutions based on previous travel behaviours, it is inevitable that transport planning will continue to seek to provide infrastructure that meets previously predicted needs, rather than meeting, and indeed shaping, the transport needs of the future*."

3.1.28 Paragraph 5.2 states, "*It is important that, as transport professionals, we engage fully with this paradigm shift. We need to take decisions and make provisions that respond to the following key drivers including the following:*

- The *drive towards Net Zero climate change or greenhouse gas (GHG) emissions.*
- *Strategies to decarbonise the transport sector, being progressed in the UK's Transport Decarbonisation Plan.*[2]
- *In terms of health and wellbeing, respond to the UK's obesity crisis (also further compounded by Covid-19) and further promote active travel provision"*

3.1.29 The guidance recommends using Scenario planning to develop a set of plausible scenarios that allows uncertainty to be accommodated within plan making. It refers to DfT's RTF183 Scenarios and assumptions and suggests the use of these scenarios based on scale, complexity and sensitivity of projects.

3.1.30 Part 2 of the guidance covers the practical application of the Decide and Provide approach. It describes about understanding the vision for the site, use of historic trends, use of current data from TRICs, forecasting future rates and sets out the monitoring requirements, using a real time example.

[2] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/932122/decarbonising-transport-setting-the-challenge.pdf

[3] Traffic Forecasts 2018: Moving Britain Ahead (RTF18), published in July 2018

Micromobility

3.1.31 The "*Inrix: Micromobility Potential in the US, UK and Germany*" report dated September 2019 explains that "*Driving and public transportation have historically been the most popular ways to travel, but the explosion of micromobility technology has brought a wide variety of new options that could make urban mobility more efficient, accessible and convenient. The emergence of micromobility-as-a-service – defined as shared bikes, e-bikes and e-scooters – highlights both the consumer and commercial appeal".*

3.1.32 The Inrix report further states that; "*The benefits of micromobility services stem from their higher efficiency in terms of energy and space. For example, the minimum square footage of one parallel parking space is 212 square feet, whereas scooters and bikes require three to six square feet to park. There's also a sharp contrast in energy efficiency; an e-scooter can travel up to 83-miles with the same amount of energy it takes an average gas vehicle to travel one-mile. However, nuance is needed in their adoption".*

3.1.33 The Inrix study concludes that *"micromobility faces a promising future by replacing short distance vehicle trips and providing currently underserved first- and last-mile solutions for public transit riders. The exceptionally high number of short duration trips found in all three countries highlights micromobility's massive market potential. Their flexible networks enable dynamic management of transportation networks providing travellers with fast, efficient alternatives to driving".*

3.1.34 Although not lawful to use on public highways at present (i.e. on highways, adopted footways, cycleways and the like), the growth of personal transport modes is likely to see changes to the way that these are used.

3.2 Summary

3.2.1 This growing evidence base, from both a national and local perspective, demonstrates that travel behaviour is changing, and that traditional methods of predicting future car travel based on historical trends, and providing for the required capacity, is outdated and predicts inaccurate forecasts.

3.2.2 Perhaps more importantly, providing for future car demand, based on historical trends, also creates negative (often unintended) consequences. A simple rule being that '*planning for people will result in places for people; planning for cars will result in places dominated by cars'*. Creating a car-dominant public realm, inducing additional traffic and therefore not solving congested networks in the medium term, worsening air pollution, and diverting funding and undermining the success of sustainable alternatives does not meet the vision for Gravity or Sedgemoor.

3.2.3 These trends and appreciation of future uncertainty and opportunities for future mobility options have been considered and incorporated into the Proposed Development and supporting transport strategy outlined in the following section of this FTP.

4 Development Proposals

4.1 Introduction

4.1.1 The Gravity development proposals have been framed around a clear vision for the site and client ambitions, and given the nature of the LDO process, the development proposals are expressed by an overarching 'description of development' and a series of LDO Parameter Plans.

4.1.2 This broad context is summarised within this section of the FTP including the aim to inherently manage travel demands through the delivery of a mix of land uses at Gravity, before outlining the approach to developing the Gravity Transport Strategy and the supporting package of key transport measures proposed – including the implementation of this FTP - as also reported in the TA.

4.2 Gravity Vision and Ambitions

4.2.1 The Gravity Vision is set out below, followed by the Gravity Objectives.

"To meet the challenges of the future, the UK must shift to a cleaner economy that embraces innovation by creating spaces that allow forward-thinking companies and local communities to thrive. We want to seize this transformation by enhancing the experiences for businesses by providing a smarter, more sustainable and operationally efficient campus.

That is why we created Gravity – a clean, smart campus where new businesses can grow and established giants can break the mould. Ideally located in Bridgwater, Somerset, with direct access to the M5 and accessible by rail, air and sea, the site will offer over 635 acres, with opportunities for up to millions of sq ft of scalable, flexible and shared working space.

There is no other UK site ready to be developed at such scale and speed, with everything in place for tomorrow's innovators to grow today. With its on-site clean energy solutions, dark fibre, excellent transport links, accessible talent pool and knowledge economy – including four top-tier universities close by, Gravity provides occupiers with the ability to build, expand and develop faster and more efficiently. Gravity will be a beacon for evolving a clean growth economy in the South West. Join us as we bring forward the future, naturally."

4.2.2 Through the LDO Project Charter, the following objectives for Gravity are set out:

- Be an exemplar in responding to the Clean Growth challenge, striving to accelerate the transition to a net zero carbon model fit for the future.
- Have a transparent approach to responding to the Sustainable Development Goals, and will establish clear priorities on well-being and inclusivity, clean energy, transport, natural resources, digital and innovation.
- Be underpinned by a clean growth energy strategy through EON Energy, providing an electro grid and a tool box of low carbon energy management and supply solutions to reduce consumption and energy demand, capture energy generation from the site and to deploy bespoke energy systems to meet occupier needs.
- Be inclusive, creating 'decent' employment opportunities, local supply chain opportunities, linked to apprenticeships, training and development, embedded in employment and skills plans.
- Offer a UK proposition for FDI through DIT, including links to Bristol port and space to host international and national scale facilities in the South West region.

- Target advanced manufacturing, life sciences, cyber, automotive / electric vehicles / e-mobility and agri-tech sectors.
- Facilitate rail restoration and new transport choices with end-to-end e-mobility.
- Be a test bed for innovation, including smart mobility and 5G deployment.
- Integrate a broad range of ancillary uses to support and increase the attractiveness of the smart campus to enable a 'live work play' scenario, thereby enabling deliverability.
- Create a range of housing solutions as part of a linked, clean and smart community, which seeks to reduce the need to travel, including homes for key workers, through private sector rent serviced accommodation, hotels, executive homes and inter-generational and extra care housing to ensure and cohesive and sustainable community.
- Consider the 'art of the possible' is responding to the challenge, whether large scale or small.

4.2.3 There are a number of Strategies that shape the vision, ambition and approach to the LDO including the Gravity Clean and Inclusive Growth Strategy and Environmental, Social & Governance (ESG) Policy, and technical documents which inform the design and implementation of the proposed development including the Digital Vision, an Energy Strategy, a Water Strategy and a Utilities Strategy.

4.2.4 The Clean and Inclusive Growth Strategy, available at www.thisisgravity.co.uk, creates a route to delivering clean and inclusive economic growth at Gravity, creating a smart campus and integrated community that supports the 4th Industrial Revolution. Key themes are established, from an evaluation of the UN Sustainable Development Goals relevant to Gravity, with over 50 priorities being defined to help translate ambition into strategy and delivery. The Gravity ESG Policy, available at www.thisisgravity.co.uk, flows from this and links to a monitoring and reporting regime to communicate progress and outcomes. Early work on place shaping will seek to enable an integrated live, work, play community with recognition of wellbeing and mental wealth as a valuable asset, and to enhance self-awareness within the future workforce.

4.2.5 The Digital Vision, also available at www.thisisgravity.co.uk, creates a route map to underpin transformation and the step change needed to attract high value occupiers and invest in infrastructure fit for the future, aligned with national and local policy and strategy objectives to transform the way we work and operate.

4.2.6 The Energy Strategy, submitted with the LDO, demonstrates that adequate energy provision and connectivity is planned to support the delivery of Gravity and the scenarios to be set out and consented within the Gravity LDO. The Energy Strategy includes details on associated phasing, management and implementation plans which cover any transitionary and short-term solutions with suggested five-year time horizons, considering potential uses / demands on Site and evolving solutions without being technology specific.

4.2.7 The Proposed Development will also include a Gravity Skills Charter, submitted with the LDO, to foster social value during construction and in operation, through local employment opportunities, local training and workforce development, improving resilience, young people's engagement and the creation of pathways to work, apprenticeships, and improved choices to enable local connectivity from the community to the opportunities provided by Gravity.

4.2.8 Similarly, a Gravity Business Charter, submitted with the LDO, will seek to stimulate business and supply chain opportunities.

4.2.9 A Gravity Locality Investment Plan, submitted with the LDO, has also been developed as part of the EZ implementation plan to plan phasing of infrastructure and priorities for investment of business rates to enable effective implementation and site mobilisation to ensure delivery as a priority, to maximise the benefits that EZ status can delivery for the locality.

4.3 LDO Parameter Plans

4.3.1 The Proposed Development is defined by a series of Parameter Plans to show the flexibility in the development consented by the LDO. These are as follows and are provided in **Appendix C**:

- Land Uses
- Transport and Movement: Strategic Infrastructure
- Transport and Movement: Micromobility
- Building Heights
- Infrastructure and Utilities
- Strategic Landscape; and
- Existing Buildings to be Demolished

4.3.2 A Concept Plan has been prepared to provide a graphic representation of a scenario that could come forward within the Parameter Plans. This is provided at **Appendix D**.

4.3.3 An accompanying Gravity LDO Design Guide has been prepared and submitted under separate cover, providing further details of the approach to design within the site including access and movement principles which are considered within this FTP.

4.4 Mix of Land Uses

4.4.1 The Gravity development proposals seek to inherently manage travel demands through the delivery of a mix of land uses supporting the primary employment site, these include:

- A commitment to manage shift patterns to maximise sustainable travel opportunities for employees and limit residual traffic impacts in the traditional network weekday AM and PM peak periods.
- Provision of supporting (e.g. retail, leisure, health) land uses specifically for employees and/or on-site residents (with the exception of the 37 Club which is to be retained for wider community use/access in line with existing arrangements).
- Residential development for on-site employees and to be subject to appropriately worded conditions linking occupation to employment on site.

4.4.2 The description of development, is as follows:

(a) any operations or engineering works necessary to enable the development of the Site, including demolition, excavation and earthworks, the formation of compounds for the stockpiling, sorting and treatment of excavated materials, import of material to create development platforms, piling, and any other operations or engineering necessary for site mobilisation, office and worker accommodation, communications, drainage, utilities and associated environmental, construction and traffic management.

(b) the development of a smart campus including:

i. commercial building or buildings with a total Gross External Area of up to 1,000,000m² which would sit within current Use Classes E (a)- (g), B2, B8 and sui generis floorspace uses and

ii. a range of buildings up to 100,000m² within Use Classes C1, C2, E (a) – (g), F, B8, including restaurants / cafes, shops, leisure, education and sui generis uses; and

iii. up to 750 homes in Use Class C3.

together with associated infrastructure including restoration of the railway line for passenger and freight services, rail infrastructure including terminals, sidings and operational infrastructure and change of use of land to operational rail land, multi-modal transport interchange, energy generation, energy distribution and management infrastructure, utilities and associated buildings and infrastructure, digital infrastructure, car parking, a site wide sustainable water management system and associated green infrastructure, access roads and landscaping.

Commercial

4.4.3 The LDO will grant consent for a total of 1,000,000m² gross external area (GEA) of use classes E (a) – (g) (commercial, business and service), B2 (general industrial), B8 (storage or distribution) and Sui Generis.

4.4.4 The LDO will facilitate the creation of a minimum of 4,000, and up to approximately 7,500 jobs which will be delivered primarily from the commercial land uses proposed within the LDO. However, jobs will also be generated through other land uses including leisure, sport, hotel, education and community uses.

4.4.5 The LDO is market-led and therefore flexibility is being sought for the commercial land use classes across the Site. There is the potential for one operator to occupy the whole of the Advanced Manufacturing part of the Site (orange hatched on the Land Uses Parameter Plan in **Appendix C** with an Advanced Manufacturing facility. Alternatively, this part of the Site could consist of a series of smaller units with several operators.

4.4.6 Commercial use E (a) – (g) is also proposed within the green hatched area on the Land Uses Parameter Plan in **Appendix C.** Commercial land uses will come forward that will complement and sit alongside other land uses proposed within that area.

4.4.7 Commercial (employment generating) uses will be integrated within residential and leisure areas to encourage an integrated community and a live-work environment. These are the blue and purple hatched on the Land Uses Parameter Plan in **Appendix C**.

Sui Generis

4.4.8 Sui Generis land uses could also come forward within the orange and green hatched areas on the Land Uses Parameter Plan in **Appendix C**. An example of this use class could include an electric vehicle charging forecourt.

Sport and Leisure

4.4.9 The Proposed Development provides several opportunities for play areas, sport and recreation, including public sport, children's equipped play and teen provision. Opportunities for provision include:

- The pitches and facilities associated with the blue hatched area in the south west corner of the site, shown as blue hatched on the Land Uses Parameter Plan in **Appendix C**; and

- Leisure use such as gyms, cafes, community facilities, nursery and residential accommodation across the blue and green hatched areas.

4.4.10 The scope of the provision will be determined by future occupiers and provision may be driven by meeting the needs of the workforce on the campus. Opportunities to integrate and offer services to the Site and the wider community are captured in the Design Guide to enhance corporate environmental and social governance and to ensure community cohesion.

4.4.11 The blue and green hatched area also includes provision for community facilities under use class F, for example small shops, a hall or meeting place or outdoor sport and recreation use.

Education and Training

4.4.12 Education and training uses will be brought forward to respond to operator(s) demand and will be linked to the employment uses and workforce on Site, for example a campus training facility to deliver research, development and training specific to the demands of occupiers including the potential need for start-up and small business space. If demand requires, a nursery/day care facility will be provided.

4.4.13 If demand requires, as a result of the residential element of the Proposed Development, early years, primary and secondary education will be provided if this need cannot be satisfied through existing provision.

Hotel

4.4.14 The green hatched zone includes provision for a hotel, which would be provided to serve the business and operational needs of the Gravity Smart Campus and Community.

Residential and Associated Community Uses

4.4.15 Up to 750 dwellings will be provided to serve the Gravity Smart Campus and Community and to provide capacity in the housing market to support the jobs on Site and reduce impacts on the local housing market. These homes will be tied to Gravity and will not be open market housing.

4.4.16 The homes will be designed to fit within the ethos of the smart campus and will offer high specification accommodation that achieves net zero carbon commitments, reduced parking, and electric vehicle (EV) charging, supporting attractiveness to those who wish to adapt to a lower carbon lifestyle and achieve a better work life balance. The homes will be designed to attract and retain a skilled workforce and be targeted at young professionals and key workers. They will therefore not compete with the open market housing market in nearby communities being of a style and nature to respond directly to the demand created by Gravity, rather than to respond to local market demand. The priority for local workforce development and sustainable connectivity will also support that the local community secures work opportunities on site.

4.4.17 Residential land uses are proposed within the green and purple hatched areas on the Land Uses Parameter Plan (**Appendix C**) and a balanced and appropriate mix of dwelling types and tenures will be provided to meet identified occupier needs.

4.4.18 Campus community uses are also expected to be brought forward within the green and purple hatched areas under the Use Class F. Examples are: a small shop, community space / halls, and will be provided to serve the Gravity Smart Campus and Community to meet on-site needs.

4.4.19 Wider community and locality uses are also proposed in the blue hatched area, such as for re-provision of a new 37 Club, which could be supported by other uses to support viability including a café, playground, cycle hire.

4.4.20 Sports pitches and other outdoor recreation is proposed and this will be confirmed by the future occupiers to meet workforce needs and for them to consider opportunities to open facilities to wider communities.

Rail

4.4.21 There is potential to re-open the disused rail line connecting the site to the main Exeter-Bristol line to facilitate both passenger and rail freight services. However, any requirement for rail will be linked to end occupier needs.

4.4.22 Further to comments made by NR in their ES scoping response, any rail reinstatement as part of the development proposals is likely to include improvements to the existing level crossing, whilst it could also be necessary to replace the existing M5 rail bridge.

4.4.23 In light of the above, rail land use relating to both passenger and freight rail, associated terminals and infrastructure is shown in the orange hatched area on the Land Uses Parameter Plan in **Appendix C**. The Parameter Plan shows a corridor for the rail infrastructure to allow for configuration of the infrastructure to accord with the requirements of an operator(s).

4.4.24 Passenger rail could enter the north west corner of the Site, and pass down the western side of the Site, terminating in a passenger station in the south west corner of the orange hatched area.

4.4.25 Freight rail could also enter the north west corner of the Site and then occupy the northern part of the orange hatched area to serve this commercial land use. It is anticipated that sidings would be provided at this location, along with associated infrastructure including mobile gantry cranes and roads.

4.4.26 From discussions with the DfT and NR, there is a shared ambition to deliver both passenger and freight facilities and it is expected that this facility will be in place and could lead to the reductions in future Gravity passenger and freight traffic movements. However, for the purpose of detailed impact assessments set out in the TA and resulting travel demand calculations and mode share targets, it has been assumed (as a worst case in terms of traffic impact) that the planned rail facility may not be delivered.

4.5 Developing the Gravity Transport Strategy

4.5.1 There is significant uncertainty around the future transport impacts of the Gravity development proposal, both because this FTP and the accompanying TA are in support of an LDO and hence it is not currently known who the final occupiers of the site will be, what the final scale and type of development will be, whether it will be delivered on a phased basis and also because there is uncertainty around how we will travel in the future as we have to adapt to a low carbon future.

4.5.2 Notwithstanding, the clear intent of Gravity is for clean growth, minimising the transport impact associated with the development, with a strong package of sustainable measures to reduce car dependency.

4.5.3 In order to understand this in the context of Gravity, we need to understand the range of possible futures for how we could manage the development to achieve one of the ‘Preferred Futures’ and to ensure that ‘Undesirable’ or ‘Unlikely Futures’ do not happen.

4.5.4 Our approach has been to develop a bespoke Scenario Testing tool, as reported more fully in the TA, that has enabled the running of a wide range of development scenarios and to demonstrate that there are a number of different sustainable futures that would be considered as Preferred Futures for the development and operation of the Gravity development.

4.5.5 In determining what is acceptable as a 'worst-case' Preferred Future, the key constraint has been set as the peak traffic generation from the development in the peak traffic periods not exceeding that already approved for the smaller HEP Extant Consent, with the clear aim to reduce the traffic impact to a level below this. The value of this cap is 1,367 vehicles in the higher AM peak (see **Table 1-1** of this FTP) and an equivalent approximate 84% mode share as car driver (as reported in Table 7.1 of the PBA Huntspill Energy Park Travel Plan Framework). In considering this peak impact, we have also been mindful of not creating a new peak at a different time of day which can be seen as a secondary cap on development vehicle generation.

4.5.6 Hence, with this as a constraint, the Scenario Testing tool has been developed to demonstrate that a larger than HEP development can be accommodated where the following are balanced to, as a minimum, meet the traffic generation requirement above:

1) The scale of the development and number of employees. The scenario testing has been based around 7,500 employees.
2) The package of sustainable transport measures that provide a real alternative to the private car for a significant proportion of the workforce, recognising also the rural nature of Sedgemoor district.
3) Where working practices, such as shift working, enable the site traffic peak periods to not coincide with the highway traffic peak periods.

4.5.7 The Scenario Tool was developed in consultation with the NH, SDC and SCC and comments were sought and addressed on development versions of the tool and incorporated during its development. The tool was agreed to be a robust tool for assessing the Proposed Development.

4.5.8 The Scenario Testing tool has been used to identify a single 'Core Scenario' for testing which is based on a comprehensive sustainable package of measures, but with a vehicle generation outcome that could be achieved in a number of different ways. In addition, the approved HEP scenario (i.e., the Extant Consent) has been retested through the Scenario Testing tool and a 'Business as Usual' (BAU) alternative Gravity assessment has been undertaken at the request of SCC and NH as a comparable against the 'Core Scenario'. The BAU test reflects a worst-case assessment as it doesn't incorporate the enhanced Gravity measures that would achieve the proposed step change in sustainability.

4.5.9 The access, transport and mobility strategy for Gravity responds to both existing conditions and emerging travel trends such as those explained earlier in this report, and the measures required to achieve the trip generation and modal share expected to reflect the defined 'Core Scenario' for this Gravity LDO assessment as set out in more detail within the TA.

4.5.10 Within the development the campus will be designed to prioritise the use of sustainable modes of transport, including the potential reinstatement of rail access for both passenger and freight services.

4.5.11 Off site, proposals will ensure that there are attractive provisions to encourage walking, cycling, micro mobility and public transport trip making.

4.5.12 This FTP provides the approach for active mobility management measures to be implemented to carry this through to the operational phases of the development, and provisions on site are adaptable to make the most of future changes in travel trends and technological advancements.

4.6 Gravity Transport Mobility Strategy Principles

4.6.1 Gravity will embrace the latest thinking in mobility solutions, allowing smarter and people focused movement through the site while creating flexible and efficient plots.

4.6.2 The principles outlined in this section of the TA are embedded in the outline design proposals for the Gravity development as set out in the supporting Design Guide. Within this document we have extracted some of the key transport principles for further consideration.

4.6.3 The transport proposals put forward in support of development at Gravity aim at delivering a framework for access and movement that is deliverable and effective based on current technologies, whilst also being resilient to future travel patterns and systems.

4.6.4 The Gravity Transport Mobility Strategy will focus on each of the following elements which are outlined in more detail below:

- Reducing the need to travel
- Reducing travel distances - creating sustained, better quality employment locally
- Improving access and choice for pedestrian movement
- Improving access and choice for cycle movement
- Introducing new and innovative Micromobility measures
- Improving local bus / public transport connectivity
- Improving rail connectivity for passengers and freight
- Parking management principles
- Reducing car trips

4.6.5 It is anticipated that all of the above can be combined into an overall service package for Gravity, that can be provided to users via Mobility as a Service (MaaS).

Reducing the Need to Travel

- Flexible / remote working practices and technological solutions including videoconferencing and online collaboration will be available to employees where possible. Flexible working arrangements allow for the opportunity to travel a little earlier or later than normal to fit in with bus or train times or to avoid the busiest time on the road, saving both time and fuel.
- Job creation will create a legacy opportunity for labour transition from Hinkley Point C to avoid longer distance travel to find alternative work, for example at Sizewell.
- The Gravity campus could include live-work units and / or work hubs which could serve to further reduce the overall need to travel off the site for some trip purposes.
- The campus will operate on a 24/7 basis.

Reducing Travel Distances

- The creation of between 4,000-7,500 new green-collar jobs at Gravity should reduce the need for the local residents of Bridgwater and its surrounding areas to travel to larger settlements such as the cities of Bristol and Exeter for access to better skilled work opportunities.

Improving Access and Choice for Pedestrian Movement

- All streets are to have a minimum of a dedicated footway to promote pedestrian movement.
- Pedestrian connections from Puriton and Woolavington to be designed for inclusivity and permeability.
- Mobility on site will be impacted positively by adoption of the design principles around waste and resource management. Reducing waste will reduce service movements and through a co-ordinated management process throughout the development efficiencies will also be realised, reducing any conflict between servicing requirements and non-motorised user requirements.

Improving Access and Choice for Cycle Movement

- Provision of high-quality highway improvements as part of the site access strategy, Gravity Link Road and the VES will facilitate and encourage trips to the site by bike.
- All streets to incorporate high quality cycling provisions to facilitate and encourage trips by bike.
- Provision of accessible, safe, secure and sheltered cycle parking facilities at key destinations throughout the site.
- Provision of cycle equipment storage, changing and shower areas across the site in appropriate areas.

Introducing New and Innovative Micromobility Measures

- Implementing micromobility solutions for people and goods through the site will reduce the burden of private cars and HGV/LGV movement.
- Where a goods hub is provided on site, this should be used by all tenants where practicable.
- Provisions for the use of scooters and e-bikes will be built into the scheme from an early stage.

Improving Local Bus / Public Transport Connectivity

- External bus routes will be able to enter the site via the new access road or existing connections on Woolavington Road.

- It is anticipated that as the site develops, provision for new or higher frequency services including zero emission (and potentially autonomous) Demand Responsive Transport (DRT)[4] vehicles will be made as part of the mobility package.

- Streets have been developed as a flexible grid to allow for scalable mass mobility solutions within the site.

- In the early phases, an electric / alternative fuel bus loop will distribute people around the site in an expedient manner.

Reconnecting the Historic Rail Link

- Proposals to re-open the disused rail line connecting to the main Exeter-Bristol line could facilitate both passenger and rail freight services. These could potentially significantly reduce HGV movements to/from the site as well as reduce trips by car, but such reductions have been excluded from the assessment on the basis as delivery remains subject to the confirmed requirements of the end site occupier.

- Should the rail proposals come forward and noting concerns raised by NR in their consultation response in relation to the existing local level crossing, it is proposed that improvements to the existing level crossing will be incorporated to upgrade the existing crossing despite minimal development impacts.

- It is also recognised that the rail proposals could require the replacement of the existing M5 rail bridge. Should this be required it would be subject to agreeing associated M5 traffic management measures and approvals.

Parking Management Principles

- Opportunities will be sought to develop consolidated parking hubs to make efficient use of land, integrate EV charging, and reduce the visual impact of parking.

- On-plot parking to be minimised and where utilised must be sensitively built into the development and must not be prominent from the street.

- The proposed Car Club on site will reduce the need to own a car and provide an option for car hire if essential for business trips, while EV charging points will be integrated into parking areas and / or bespoke commercial facilities.

- Designing in EV charging and smart infrastructure into design codes to ensure effective and seamless implementation.

- Flexible design of parking hubs to enable the potential for land to be re-purposed in the future.

Site Wide Trave Plan and Mobility Management

- This FTP will be implemented at the development with associated modal share targets, measures to encourage travel by sustainable modes of transport, and a robust monitoring and management programme outlined within **Section 9** of this report.

[4] *DRT is a form of shared private or quasi-public transport for groups travelling where vehicles alter their routes each journey based on particular transport demand without using a fixed route or timetabled journeys. These vehicles typically pick-up and drop-off passengers in locations according to passengers needs and can include taxis, buses or other vehicles.*

Mobility as a Service (Maas)

4.6.6 MaaS is the term used to describe the integration of transport services into a single mobility service accessible on demand, which is leading to the transition away from personally owned vehicles. An illustration of how a Gravity MaaS package could look is shown below.

4.6.7 The aim of these services is to provide an integrated end-to-end solution utilising a single platform for booking, payment and journey management. Services are designed to reduce dependence on private cars leading to greener journeys of the future by utilising the most efficient transport mode through a streamlined user experience.

4.6.8 The range of transport measures proposed will not all be available from day one of the development opening. There are many issues that will impact on the timing of measures becoming available including but not limited to things such as the availability of technology, demand for trips and distribution of staff, cost of equipment and operations, and the fact that different groups in society will respond to and take up new technology at differing rates. As such the route map to a mixed mobility future at the development will be both revolutionary and evolutionary.

4.6.9 It is therefore important that the Proposed Development is delivered in such a way that delivers sufficient flexibility and resilience so that it can adapt to the future of travel when such opportunities present themselves.

4.7 Vehicular Site Access

Primary Vehicle Access

4.7.1 The Transport and Movement – Strategic Parameter Plan in **Appendix C** indicates the location of the site access proposals which are described below.

4.7.2 Primary access to the site for all vehicular traffic will be provided by the Gravity Link Road scheme which will be delivered in October / November 2021. A general arrangement drawing of the Gravity Link Road scheme is provided in **Appendix A**.

4.7.3 The Gravity Link Road will provide a new two-way single carriageway access road from the site via a new at-grade 4-arm roundabout on Woolavington Road on an alignment to the east and south of Puriton Village, crossing Hillside and connecting to the A39 Puriton Hill with another new at-grade roundabout.

4.7.4 The Gravity Link Road scheme will provide direct and attractive access to the M5 motorway via Junction 23 and the A38 Major Route via the Dunball Roundabout.

4.7.5 As part of the Gravity Link Road proposals, the existing priority junction of Hillside / A39 is to be closed to vehicles, with access south of the new access road restricted to pedestrians, cyclists, equestrians and farm vehicles for field access.

4.7.6 South of Woolavington Road, the access road will cross the existing highway at Hillside where a new priority junction will be provided with a right-turn ghost lane to allow access and egress to and from the existing residential area of Puriton Park.

4.7.7 Whilst the principle function of the Gravity Link Road is to provide a strategic access to the Site, it will also provide additional local benefits including:

- The provision of access, highway and safety improvements at the existing junctions of Hall Road, Old Puriton Hill and Hillside.
- Restriction of HGV traffic through Puriton and Woolavington villages.
- Reduced through traffic movement in Puriton.
- Facilitate public realm and complementary traffic management measures in Puriton and Woolavington villages, and Woolavington Road.
- Improved connectivity, accessibility and general safety for pedestrians and cyclists and public transport users.

Secondary Vehicle Access

4.7.8 Secondary site access requirements for Gravity will largely be driven by the needs of end occupiers and therefore be proposed in detail as part of future compliance applications. Notwithstanding, several potential options are identified in this TA which have been the subject of technical investigation to demonstrate feasibility and compliance with appropriate highway design standards.

Eastern Site Access

4.7.9 **Drawing 332310102/5505/102** is attached at **Appendix E** and illustrates a potential Eastern Secondary Site Access on Woolavington Road. This junction would be positioned close to the south east boundary of the site.

4.7.10 The drawing demonstrates that a new simple priority T junction can be provided in accordance with the highway design guidelines set out in the Manual for Streets. The junction can achieve 2.4m x 43m horizontal visibility splays from the minor arm in both directions along Woolavington Road, utilising land forming the adopted highway or under the applicant's control. These visibility splays are based on the introduction of a speed limit change on Woolavington Road which would involve reducing the national speed limit to 30mph.

4.7.11 The priority T junction is shown to include a 5.5m wide site access road with a 2m wide footway on the western side and a 4.5m wide segregated foot / cycleway on the eastern side of the carriageway. It will also tie into the VES proposals which are due to come forward in the future.

Western Site Access

4.7.12 **Drawing 332310102/5505/101** is attached at **Appendix E** and illustrates a potential Western Secondary Site Access on Woolavington Road.

4.7.13 The drawing demonstrates that a new simple priority T junction can be provided in accordance with the highway design guidelines set out in the Manual for Streets. The junction can achieve 2.4m x 43m horizontal visibility splays from the minor arm in both directions along Woolavington Road, utilising land forming the adopted highway or under the applicant's control. These visibility splays are based on the introduction of a speed limit change on Woolavington Road which would involve reducing the national speed limit to 30mph.

4.7.14 The priority T junction is shown to include a 5.5m wide site access road with a 2m wide footway on the eastern side and a 4.5m wide segregated foot / cycleway on the western side of the carriageway. It will also tie into the VES proposals which are due to come forward in the future.

Eastern and Western Approach Site Access

4.7.15 The site benefits from an established access onto Woolavington Road in the form of Y-shaped twin priority junctions where the Eastern and Western Approach Roads link to form a single point of entry to the 37 Club and main site.

4.7.16 The Eastern and Western Approach access junctions are shown as being retained in the parameter plan as it is unclear at this time whether they will ultimately be required. If end occupier requirements dictate that they are needed, it is likely that the junctions could need some level of improvement subject to the type and intensity of use proposed. This would be considered further as part of future compliance applications.

Emergency Access

4.7.17 A secondary vehicular access currently connects the site with the B3139 to the east. This is proposed to be retained for emergency, operations, pedestrian and cycle access only.

4.8 Off-Site Pedestrian, Cycle and Micro-Mobility Access Proposals

4.8.1 Walking, cycling and the emerging micro-mobility modes can offer a real alternative to the private car for short distance trips and play an important role in public transport journeys. The provision of infrastructure for these modes is therefore a central component of the access and movement strategy and key to establishing a sustainable travel culture at the site.

4.8.2 Discussions with SCC officers have also taken place in respect of wider off-site connections including toward Bridgwater Town Centre and Bridgwater Train Station as part of a Gravity offsite Pedestrian, Cycle and Micro-Mobility (PCMM) strategy.

4.8.3 Although not lawful to use on public highways at present (i.e. on highways, adopted footways, cycleways and the like), the growth of personal transport modes is likely to see changes to the way that these are used.

4.8.4 There are numerous emerging technologies in this sector, and some of the current potential favourites are reviewed below. Some of these are relatively commonplace, and available to buy from a range of outlets – others are new innovations and are somewhat unproven – but show the trend towards ever more niche focussed devices.

- Push Scooters – affordable, easy to ride, portable and carryable but small wheels are a limitation;
- Electric Scooters – affordable for electric power, easy to ride, easy to recharge, portable and carryable, but small wheels and limited range are a limitation;
- Electric Skateboard – range 6-12 miles, can cope with 1 in 4 gradient, enjoyable to ride, can be used with or without power, however can be challenging in wet conditions and small wheels means a smooth surface is required;
- Electric Bike – range generally between 30-50 miles, comfortable to ride, can be used with or without power, versatile but heavy, needs somewhere safe to be left and relatively expensive;
- Electric Moped Scooter – range 30-50 miles, easier maintenance than a traditional scooter, quiet, but may require a license, bulky, needs to be locked outside and limited space for luggage;
- Hoverboard – range of roughly 12 miles, easy to master, affordable, but not all are waterproof and not as fast or versatile as other modes; and
- Segway – range of 40 miles, handlebars make them easy to ride, enough around to be considered safe and reliable, but bulky, slow and less versatile than other options.

4.8.5 Design of infrastructure for any of the above will need to consider legal speed limits and how these may evolve in the future.

4.8.6 All of the primary and secondary vehicle access junctions explained previously will incorporate high quality infrastructure provision to facilitate and encourage pedestrian, cycle and micro-mobility travel.

4.8.7 The access points to the south of the site provide for direct connectivity into the VES proposals and onward travel into the villages of Woolavington and Puriton and beyond.

4.8.8 In addition, there is scope to provide an additional access for these modes at the western edge of the site to connect onwards into Puriton village via Middle Street. This may necessitate delivery of supporting highway safety improvements along sections of this route to

make best use of existing infrastructure and to ensure safe crossing facilities are accommodated where necessary. Any requirement for this additional route remains subject to further review as part of future compliance applications when more detail is available regarding the on-site development layout and associated travel demands.

4.8.9 The existing connection between the western edge of the site and Middle Street, is an existing adopted rural track which varies in width between 5.1m and 10.0m and is not shown to be surfaced. It is considered that the existing track provides access for agricultural vehicles to access the existing fields, which will need to be retained as part of the access proposals. The potential improvements to the existing adopted track include:

- Provide a 5.0m segregated foot/cycleway along the majority of the route, with connection into Gravity.
- Where the width of the highway cannot accommodate a segregated foot/cycleway, a section of shared foot/cycleway could be provided as a transition to Middle Street.
- The existing junction of Middle Steet and Rookery Close could be provide as a raised table-top priority junction.
- A pedestrian route to the table-top junction could be provided as an at-grade footway, with hazard warning tactile paving provided to denote edge of footway, with connection across the raised junction to the existing footway along Middle Street and Rookery Close.
- It is considered that cyclists could join the raised carriageway from the shared foot/cycleway transition and continue on-carriageway along Middle Street.
- Connections to the existing field access could be retained, with agricultural vehicles permitted to travel along the segregated foot/cycleway.
- In order to restrict the site access to non-vehicular traffic, it is considered that lockable bollards could be provided.
    - The bollards can either be located at the connection between the rural track and Middle Street, which would require agricultural vehicles to unlock the bollards but would prevent other vehicle traffic from using the track.
    - Alternatively, the bollards could be located near to the site boundary so access is retained to the fields without restrictions, but this could lead to misuse of the track.

4.8.10 Middle Street provides a connection to Puriton village, and ties into Woolavington Road at the junction with the Rye. Middle Street is considered to be a quiet, low trafficked ‘green lane’, which is lit and provides a footway along the majority of its length. Middle Street is approximately 500m in length with two sections of approximately 60m and 180m where no footway is provided, in keeping with its rural character. As agreed with SCC, a ‘green lane’ doesn’t require a separate footway, but can be used with pedestrians and cyclists within the carriageway, such as along Pawlett Road and Downend Road.

4.8.11 If deemed required, measures to highlight the presence of pedestrians, such as a ‘virtual footway’ or change of surfacing could be provided, whilst retaining the rural character of the area. Pedestrian access to Woolavington Road is also provide via Canns Lane and Culverhay Close, therefore providing a shorter distance where no footway is provided.

4.8.12 Formalising Middle Street has not been considered, due to the limited width, and therefore standard carriageway geometry could not be provided. Also, it is considered that a formalised highway layout could detriment the existing character of Puriton Village and encourage increased vehicle speeds. However, there are other potential measures such as, sympathetic wooden bollards to denote the carriageway edge and provide additional space for pedestrians,

a change of surfacing in key locations to raise awareness of village location or planting and/or emphasizing local distinctive features within the village, such as build-out around the key historical buildings.

4.8.13 The requirement to introduce new measures to Middle Street and onward connection from the site to Puriton would be subject to further review as part of any future LDO Compliance Application.

Connections to Bridgwater Town Centre

4.8.14 In consultation with SCC officers, the Gravity PCMM Strategy has identified a key route from the site to the Town Centre, via the A38. The route is proposed to utilise the Gravity VES proposals through Puriton, connecting to the existing Bridleway bridge over the M5 to Downend. From Downend Road, a controlled crossing of the A38 could be provided to connect PCMM users to the SCC proposed foot/cycleway improvements along the A38, south to Dunball Roundabout.

4.8.15 The existing bridleway bridge over the M5, connecting Riverton Road to Pawlett Road is approximately 100m in length. The width of the bridge between kerbs is 3.1m and 4.4m between the parapets, which are approximately 1.85m high. Lighting is provided at either end of the bridge, with a lighting column provided at the location the bridge ties into the existing footway along Pawlett Road, and another lighting column located to the east, at the top of the sloped access from Riverton Road. There is approximately 95m spacing between the existing lighting columns.

4.8.16 Access to the bridge from Riverton Road, is via an existing slope which rises up to the bridge level, and due to an existing private drive-way constraint in this location it is considered that the gradient could not be increased.

4.8.17 No improvements are proposed for this existing link including the existing bridge over the M5; it is noted through discussions with NH and SCC officers that potential improvements may be sought, although it is considered this should remain subject to review as part of any future LDO Compliance Application(s) and when further details are available regarding future occupiers.

4.8.18 Along the A38, south of Dunball Roundabout, SCC are undertaking a review of HPC's Element 2 Scheme which provided a shared foot/cycleway along the A38 between Express Park and Dunball Roundabout. SCC are undertaking a review to understand what improvements can be proposed to provide the scheme is in accordance with DfT's Local Transport Note 1/20 'Cycle Infrastructure Design', July 2020. Whilst these works are on-going, SCC confirmed that a shared foot/cycleway (approximately 2.5m wide), will be delivered as the minimum level of pedestrian and cycle improvements along the A38.

4.8.19 The route along the A38 becomes constrained south of the junction with Wylds Road due to the existing limited highway land and third-party frontages. HPC's Element 3 Scheme therefore considers a shared foot/cycleway along the River Parrett to the Town Centre Scheme. Whilst these works have not been delivered to date, SCC confirmed that this route will be delivered with view to a connection to SDC's Celebration Mile via Bridgwater Docks.

4.8.20 There could be an opportunity for the Gravity proposals to support delivery of the SCC improvements along the A38 corridor and subject to the outcomes of SCC's ongoing review, delivery of this could potentially be supported through an allocation of retained business rates via the Locality Investment Plan process as explained further in Chapter 9.

Connections to Bridgwater Train Station

4.8.21 Due to existing constraints along the A38, the PCMM route is proposed to divert along the River Parrett to provide a continuous route to the Town Centre, which creates an indirect route to Bridgwater Train Station from the site. Therefore, an alternative route, consisting of a continuous PCMM route, could be provided to Bridgwater Train Station, to the east of the A38, via Kings Drive.

4.8.22 Following discussions with SCC officers, it could be possible to connect PCMM users to Kings Drive via an improved crossing on the A38 north arm of the Kings Drive roundabout. The PCMM route could utilise the existing segregated pedestrian and cycle infrastructure along Kings Drive to the A39, with an existing signalised crossing providing a connection onto the shared foot/cycleway along the southern edge of the A39. A shared foot/cycleway along the A39 could be delivered, to connect to Parkway. Whilst this remains subject to ongoing design review, it is expected to require consideration of:

- The existing 3.0m shared foot/cycleway, with no separation strip, ends approximately 50m west of the junction of A39 Bath Road / Kings Drive.
- To widen the existing footway to provide a 3.0m shared foot/cycleway, narrow carriageway through reduction of central hatching, providing a minimum carriageway width of 6.4m and a foot/cycleway width of 3.0m
- Due to the limited highway land available, no separation to the carriageway can be provided, as the existing shared foot/cycleway along the A39 to the east of the junction of A39 Bath Road / Kings Drive.
- At the junction of A39 Bath Road / Parkway, the 3.0m shared foot/cycleway could either divert across an area Open Space or run along the carriageway edge to connect onto Parkway. The potential use of this land for pedestrian and cycle proposals has been agreed in principle with SDC.
- Across the Parkway arm, a raised pedestrian and cycle priority crossing could be provided, connecting cyclists into Bath Road service road, as a low trafficked quiet street.
- Cyclists can continue on-carriageway along Bath Road with a raised pedestrian and cycle priority crossing of Trevor Road.

4.8.23 To the west of Trevor Road, PCMM users could then utilise the existing low trafficked quiet streets of Bath Road, Frederick Road and Fairfax Road providing a route to the south, which connects to Piggy Lane. Piggy Lane provides an existing segregated foot/cycle path to Bridgwater Train Station. SCC have identified an improvement scheme for Piggy Lane which is not currently funded.

4.8.24 There could be an opportunity for the Gravity proposals to support delivery of these potential improvements along the A39 and Piggy Lane for routes to Bridgwater Train Station and subject to further design review and preparation of a full scheme designs, delivery of these proposals could also be supported through an allocation of retained business rates via the Locality Investment Plan process as explained further in Section 9.

4.9 Bus Service Proposals

4.9.1 The Gravity blueprint for a smarter, cleaner future embraces attractive and sustainable travel alternatives to the private car with a Passenger Transport Strategy that is designed to encourage mode shift and travel behaviour change. The Strategy seeks to identify places with a critical mass of population where bus services could provide fast, direct and reliable links to Gravity and then to develop service offers that are operationally efficient, commercially attractive and financially sustainable.

4.9.2 The Strategy is consistent with the National Bus Strategy, Bus Back Better, and SCC's emerging BSIP. It consists of a mix of scheduled fixed timetable services for core corridors where demand is strongest and flexible demand responsive operations where demand is lower or more diffuse. In both cases, services will be operated by high quality vehicles with features such as real time tracking and free on-board Wi-Fi. Services will be direct with fast journey times, supported by strong marketing and information.

4.9.3 At this stage, the strategy has been developed on the basis of modelled demand forecasts and which are necessarily indicative rather than prescriptive. The specific proposals will be refined and updated to reflect the characteristics and travel needs of the eventual workforce as part of future LDO Compliance Applications and will be informed by discussions with prospective occupiers once these are known as well as key stakeholders. Outline proposals will also need be tested in respect of forecast uptake, mode shift and financial performance to optimise the operational offer.

4.9.4 The indicative service proposals outlined at this stage and included are as follows:

- Timetabled service G1 operating between Bridgwater, Gravity and Street and also serving Puriton and Woolavington
- Timetabled service G2 operating between Burnham, Highbridge and Gravity and also serving Woolavington.
- Demand responsive services from western and southern estates in Bridgwater, including Northfield, Haygrove, Wembdon and Hamp, and extending to North Petherton.

4.9.5 Times of operation and service frequencies would be dependent on shift patterns and working hours on site.

4.9.6 It is anticipated that the Gravity Passenger Transport Strategy proposals could be funded through an allocation of retained business rates via the Locality Investment Plan process as explained further in Section 9.Car Parking Management Plan

4.9.7 A Car Parking Management Plan (CPMP) will be prepared as part of any future LDO Compliance Application

4.9.8 Gravity recognises that limiting car parking availability can play a key role in reducing the traffic impacts associated with the development proposal and supporting the overall Gravity development vision for clean and sustainable growth.

4.9.9 Any reduction in levels of car parking provision will need to be part of a balanced approach incorporating the parallel delivery of sustainable transport improvements to facilitate access to the site by non-car modes. Consideration will also need to be given around how this works in practice including managing access to parking at shift change over.

4.9.10 This includes extensive sustainable transport improvements specifically identified to support the development as considered in more detail within this FTP, together with broader area-wide transport improvements being delivered by a range of stakeholders. These improvements will be delivered over time and some will take several years to be completed and improvements for non-car modes to be fully realised.

4.9.11 An important aspect to consider is the expectation of prospective employment occupiers and a need to ensure that the development proposal provides sufficient car parking to attract incoming occupiers, whilst retaining the overarching transport objective of limiting reliance on travel by car.

4.9.12 It is proposed that the CPMP should set out further details including:

- Amount of combined Cycle and Push/E-scooter parking: minimum provision to be calculated by applying the provisional cycle mode share target by the total number of employees and/or residents (associated with each application), with an additional provision for visitor provision (with provision not to be below adopted local standards unless justified)

- Amount of Car / Motorcycle parking: maximum provision to be calculated by applying the provisional car driver / motorcycle mode share target by the total number of employees and/or residents (associated with each application), with an appropriate additional provision for visitor provision (with provision not to exceed adopted local standards unless justified)

  - Minimum 5% disabled parking provision included within total car parking (with provision not to be below adopted local standards unless justified)

  - Proportion of EV charging infrastructure to be determined as part of each future LDO Compliance Application for all vehicle parking (with provision not to be below adopted local standards unless justified)

- All Car parking to be provided in locations across the site in accordance / compliance with the Gravity Design Guide (prepared under separate cover)

- Prior to occupation, discussions will be undertaken with Car Club providers to confirm interest and secure provision prior to occupation as part of the FTP and defined as part of the occupier specific Workplace and/or Residential Travel Plans for the development prior to occupation.

- Prior to occupation, provision of spaces for Car Sharing will be defined, with spaces provided within preferable locations car parking area. These will be defined as part of the occupier specific Workplace and/or Residential Travel Plans for the development prior to occupation.

- Proposed parking control, management and monitoring measures which will be reviewed alongside occupier specific requirements but could include:

- <u>Control:</u> car parking spaces will be subject to control through:

  - On-street car parking bays will be linked to specific occupiers, to be subject to permits issued by the occupier(s);

  - Off-street car parking will be linked to specific occupiers, to be subject to permits issued by the occupier(s);

  - Visitor car parking will be subject to a short-term permit issued by the occupier(s); and

- On-street stopping prohibition / restriction.

- Management: Gravity will manage the car parking on all carriageways and public areas throughout the Proposed Development. This could be undertaken either by an Estate Management Company, or sub-contracted to a reputable, suitably qualified and registered car parking operator company. Notwithstanding the adopted approach, the Management will consider the:

  - issue of permits for specific stated vehicles (such as the Car Club vehicles if accommodated on-street);
  - issue of permits to an agreed protocol, based on need, and collect an annual charge, if required;
  - monitor and manage the access barrier(s) to the site and car park areas (if needed) to ensure they remain operational and to avoid potential blocking back
  - monitor the car parking bays on a regular basis throughout the restricted hours;
  - engage with the site wide Travel Plan Mobility Coordinator and individual Workplace and Residential Travel Plan Coordinators in respect of parking related matters;
  - issue enforcement notices and collect fines for transgression;
  - arrange for removal of vehicles belonging to habitual offenders and those ignoring the parking restrictions.
  - private area occupiers with on-plot car parking will manage their own parking areas to a protocol agreed with the developer and/or management company. This role could be delegated to the same car parking management company by agreement if preferred by the occupier.

4.10 Travel Plan Coordinators

4.10.1 The appointment of a Site-Wide Travel Plan Mobility Coordinator (TPMC) for the Proposed Development will be central to the successful implementation and management of measures across the Site. The Site-Wide TPMC will be appointed prior to occupation of any units and will work with all relevant stakeholders, including for example SDC and SCC, bus operators and local groups. The appointed Site-Wide TPMC will also take ownership and manage the FTP and the monitoring strategies.

4.10.2 Individual Site/Occupier Specific Travel Plan Coordinators will also be appointed at the various other workplaces and land uses as occupancy increases. Although the roles and responsibilities between the different land-uses will partly differ, the main areas for each Individual Site/Occupier Specific Travel Plan Coordinator are set out below:

- Managing and coordinating the implementation of each specific Travel Plan;
- Checking the measures set out in the Travel Plan are available;
- To provide a focal point on Travel Planning issues;
- To liaise with other TPCs in the Development, the Local Authorities and public transport operators;
- To promote and market the individual measures and packages;

- Organising periodical travel surveys of residents or employees;
- Reviewing and monitoring the success of the Travel Plan;
- Setting and amending mode share targets; and
- Suggesting other potential measures should mode share targets not be achieved.

4.10.3 Further details on the management of the FTP and the Individual Site/Occupier Specific Travel Plans are included within **Section 8**.

4.11 Marketing and Promotional Strategy

4.11.1 Traditional tools of marketing and advertising, such as travel packs, leaflets and a site specific web site, will be used in conjunction with measures that encourage a higher level of community involvement to create awareness and promote sustainable travel at the Proposed Development. This will be achieved using the following techniques:

- 'Recruiting' Sustainable Travel Behaviour Champions for key roles in delivering the sustainable travel proposals. These will not be formal roles, but based around individuals who will work through their own social networks to make people more aware of available travel options;
- Using social marketing techniques such as clubs, classes and social networks; and
- Resident and staff welcome packs, including maps, public transport information and upcoming local and national sustainable travel events, such as 'Walk to Work Week' for example.

4.12 Summary

4.12.1 A transport strategy has been prepared to support access and movement to, and movement within, the Gravity development seeking to maximise opportunities for travel by sustainable modes whilst minimising residual highway impacts.

4.12.2 As set out earlier within this report, this approach is central to the overarching development vision at Gravity for clean and sustainable growth and is aligned with national and local transport policy objectives.

4.12.3 The overall travel demand strategy for Gravity draws on current Travel Plan best practice to ensure sustainable travel practices are embedded from the outset of the Proposed Development, to deliver immediate impacts and to progress towards achieving the aims and objectives of the Travel Planning process.

4.12.4 To help meet the aims and objectives of the FTP, the strategy will combine a range of 'hard' and 'soft' measures, some based on the overall development proposals, whilst others will be specific to residential and employment land uses. Measures will be integrated into the Site design, marketing and occupation of the Site.

4.12.5 This section of the report provides a summary of the supporting transport mitigation measures identified to support the Gravity development proposal as defined by the 'core scenario' and outlines the proposed approach as to how these measures will be secured through the LDO process.

4.12.6 There remains significant uncertainty around the future transport impacts of the Gravity development proposal given the very nature of an LDO application with broad development parameters outlined at this stage rather than occupier led fixed requirements. For example, is

not currently known who the final occupiers of the site will be, what the final scale and type of development will be or whether it will be delivered on a phased basis.

4.12.7 The measures identified are therefore considered to be required to support/mitigate the Gravity development proposals as defined by a single set of land use assumptions. Accordingly, they represent an outline package of measures that are likely to be required for a development of this scale/type but remain subject to review following confirmation of the development proposals required by the end occupier and managed through future Compliance Applications; the securing of these measures including implementation of this FTP is considered further at **Sections 8** and **9**.

5 Aims and Objectives

5.1 Aims

5.1.1 The broad aim of this FTP is to reduce single occupancy car trips associated with the development and maximise sustainable travel opportunities, such as walking, cycling, public transport use, micro-mobility and car sharing for future residents, employees and visitors of the development.

5.2 Objectives

5.2.1 The broad objectives of the Travel Planning process at Gravity include:

- A reduced need to travel 'off-site' through carefully designed land-use provision and location where possible within the parameters of the application.
- Creating an inherently and holistically sustainable form of development; to build upon good urban design principles that increase the permeability of the development for promoting walking, cycling, micro mobility and public transport use.
- Encouraging the use of non-car modes of transport; to promote the use of walking, cycling, micro mobility and public transport.
- Focussed travel demand management measures; to reduce the overall reliance on the private car for all trip purposes and car parking availability with a long-term strategy of mode shift away from single occupancy car use against present day proportions.

5.2.2 The principle is to implement measures to better manage travel demands aimed at reducing private car use compared with baseline proportions as soon as possible within the progression of the Development. This FTP and its constituent Travel Plans will play a key role in realising the aims and objectives of the overall transport strategy for the Proposed Development.

5.3 Delivery of the Aims and Objectives

5.3.1 To achieve the aims and objectives, a framework of measures will be applied aimed at achieving a higher proportion of more sustainable transport use compared with present day proportions.

5.3.2 These objectives will be used as a guide for the development of objectives for the Individual Site-Specific Travel Plans.

5.3.3 Aims and objectives will be reviewed and updated regularly to monitor progress against these objectives. Annual surveys of travel mode choice will be undertaken to assess changes in travel behaviour and identify changes and / or additions to the aims and objectives.

5.3.4 Details of the monitoring are discussed in more depth in **Section 8.**

6 Travel Plan Targets

6.1 Introduction

6.1.1 This section provides details on provisional baseline and target mode shares, which will remain subject to review as part of future LDO Compliance Applications and will be used to assess the effectiveness of the site Travel Planning process.

6.2 Baseline Mode Share

6.2.1 In order to set provisional targets for the FTP and benchmark future changes in travel behaviour, baseline travel information must be established.

6.2.2 The base mode share information has been sourced from the PBA Huntspill Energy Park Travel Plan Framework (PBA, March 2017 Rev 05) and will be subject to review and update from initial occupation through new surveys.

Mode	Mode Share (all land uses)
Single Occupancy Vehicle	84%
Car Share	7.7%
Public Transport	3.5%
Walk	2.3%
Cycle	2.6%
Total	**100.0%**

Table 6-1 Provisional Baseline Modal Share

6.3 Provisional Target Mode Share

6.3.1 The provisional target mode share information has been sourced from the Gravity TA prepared under separate cover and will be subject to review and update as part of future LDO Compliance Applications.

Mode	Mode Share (all land uses)
Single Occupancy Vehicle	65.1%
Car Share	16.8%
Public Transport	9.83%
Walk	1.0%
Cycle	7.3%
Total	**100.0%**

Table 6-2 Provisional Target Modal Share

6.4 Summary

6.4.1 The target mode share would see a reduction of approximately 19% in trips made as a Single Occupancy Vehicle (SOV). This would also see increases in car sharing and trips made by active modes and public transport. Travel by micro-mobility modes of transport may be incorporated in baseline and target modal share information as part of future LDO Compliance Applications.

6.4.2 The measures set in this FTP will work towards this provisional target mode share for SOVs, and in the longer term seek to achieve further reductions in car use upon full occupation of the development, all of which will remain subject to review as part of future LDO Compliance Applications and the proposed Management, Monitoring and Review process outlined in Section 9.

7 Travel Plan Guidance for Future Occupiers & Residents

7.1 Introduction

7.1.1 This section provides guidance on and sets out the parameters for the requirement for individual sites and/or occupiers at Gravity to prepare and implement their own Individual Site-Specific Travel Plans.

7.1.2 It includes what is required of each occupier in terms of appointing a Travel Plan Coordinator and preparing, implementing and managing their own subsidiary Travel Plan and measures. Each subsidiary Travel Plan would comply with, and be consistent with, the wider targets and requirements of this Framework Travel Plan.

7.2 Workplace Travel Plans

7.2.1 Workplace Travel Plans are 'destination' Travel Plans and focus primarily on commuter travel and travel in the course of work.

7.2.2 Commercial occupiers will be required to be part of the FTP process as part of the terms of lease or purchase clauses. The requirements are likely to vary according to the size and type of the occupier. Larger occupiers will be required to prepare separate stand-alone Workplace Travel Plans in accordance with this FTP, along with individual initiatives and targets, and to appoint a Travel Plan Coordinator.

7.2.3 Smaller organisations will not be required to prepare their own Workplace Travel Plan; however, all occupiers are encouraged to take part actively in the travel planning process and to refer to this FTP for guidance on appropriate initiatives and measures. Each organisation is encouraged to nominate a representative/contact for travel-related matters to act as a point of contact for employees.

7.2.4 The decision on the threshold between small and large occupiers will be agreed SCC and SDC prior to first occupation and monitored, as appropriate.

7.2.5 Workplace Travel Plans will need to be submitted to the site wide Travel Plan and Mobility Coordinator and SCC for approval within 3 months of occupying the building.

7.2.6 The key measures and strategies common to workplaces that occupiers will be required / encouraged to adopt include:

"Required to":

- allocate appropriate secure and covered cycle parking;
- provide male and female changing rooms, lockers and shower facilities;
- provide on-site notice boards and/or intranet websites displaying cycling, walking and public transport routes, and other relevant material such as information on "Bike-to-Work" days and other sustainable events;
- collate and issue 'Welcome Travel Packs' to all employees upon commencement of work, providing information about parking arrangements, walking, cycle and public transport routes and local initiatives;
- provide priority parking for car-sharers;

- Provide travel vouchers for each employee which can be put towards bus tickets, cycle equipment, on-site cycle hire or discounted car club membership or Gravity MaaS.

  "Encouraged to":

- develop a cycle to work scheme, or participate with the Development scheme;
- offer a scheme for discounted bicycles, such as the Government's Cycle to Work Scheme; vouchers; or an interest-free loan;
- provide bike maintenance vouchers for staff members who commit to a cycle to work scheme;
- encourage staff to enrol with the Carshare website to car share, and to create BikeBUDIs;
- provide information about the health benefits of cycling and walking to work;
- implement more flexible working, such as staggered hours, compressed working week, or remote working from home if feasible;
- offer a free emergency lift home for car passengers who have committed to the Car Share scheme; and
- purchase/lease electric vehicles as pool cars.

7.3 The Residential Travel Plan

7.3.1 A Residential Travel Plan will be prepared and submitted to the site wide Travel Plan and Mobility Coordinator and SCC for approval before occupation.

7.3.2 The key measures and strategies to be adopted in the Residential Travel Plan include:

"Required to":

- Develop, collate and issue Residential Welcome Packs for all residential dwellings upon occupation, containing maps of local walking and cycling facilities in the area, public transport timetables, promotional material for the site-wide website and local car-share database, contact details for local bus and taxi companies, contact details for local authority travel-based initiatives and promotions, contact details for car club, and information about all local facilities in the area;
- Provide adequate secure cycle parking;
- Provide public notice boards and / or intranet websites displaying cycling, walking and public transport routes, and other relevant material such as information on "Bike-to-Work" days and other sustainable travel events, or provide information about the health benefits of cycling and walking to work;
- Provide the infrastructure for broadband access to every household, including an information leaflet containing key websites to promote sustainable transport options, home shopping, smartphone applications related to travel etc.;
- Provide travel vouchers for each resident which can be put towards bus tickets, cycle equipment, on-site cycle hire or discounted car club membership or Gravity MaaS.

"Encouraged to":

- Travel induction sessions for all new residents and the offer of personalised travel planning and advice;
- Provision of information and advice on local travel issues.
- Encourage residents to enrol with the Liftshare website to car share;
- Provide cycle training; and
- Subsidise residents' membership of any on-site Car Club.

7.4 Individual Site-Specific Travel Plan Coordinators – Roles and Responsibilities

7.4.1 The identification of Individual Site-specific Travel Plan Coordinators is central to the successful implementation and management of the Travel Plan measures and incentives.

7.4.2 The general responsibilities of the individual Travel Plan Coordinators are set out below:

- Liaise with the site wide Travel Plan and Mobility Coordinator and other individual Travel Plan Coordinators;
- Liaise with the site wide Travel Plan and Mobility Coordinator and SCC/SDC to agree interim and possibly long-term mode share targets in accordance with the provisional FTP targets;
- Prepare the occupier's individual Travel Plan and submit it to the site wide Travel Plan and Mobility Coordinator and SCC for approval within 3 months of occupation of the Site;
- Fully inform all employees/residents all means of travel available, preparing and disseminating Welcome Packs for employees or residents;
- Provide Personalised Travel Planning and induction sessions for all new employees and visiting residents to provide personalised information;
- Act as a focal point for transport issues in their organisation for employees and residents;
- Supply relevant information as necessary and increase awareness of transport and environmental issues;
- Collate travel information from employees/residents at agreed monitoring periods via travel surveys, staff questionnaires and travel diaries, and providing an analysis of progress towards individual mode share targets and forward this information on to the site wide Travel Plan and Mobility Coordinator;
- Provide information on public transport and regularly publicise current cycle and pedestrian routes in the area, via conveniently located noticeboards and company web pages;
- On commercial sites, regularly assess relevant facilities (e.g. cycle facilities; shower, locker and changing room facilities) and recommend improvements, if required;
- Emphasise the health benefits of cycling and walking to work through notices and seminars, and organising publicity events such as 'Bike to Work' Days; and

- Encourage car sharing when staff need to make journeys and public transport is not a practical option.

7.4.3 The individual occupiers and employers would be encouraged to liaise with each other, potentially to contribute to shared travel plan coordinators for their sites, or possibly, by agreement, use the site wide Travel Plan and Mobility Coordinator to undertake this role.

7.5 Targets, Monitoring and Review

Targets

7.5.1 Each occupier required to prepare a travel plan will be required to liaise with the site wide Travel Plan and Mobility Coordinator to agree short-term and longer-term mode share targets for the Individual Travel Plans.

7.5.2 The subsidiary Travel Plans will set targets in different ways, depending on phasing and development timescales. Interim targets should be agreed and these targets should be set and agreed on occupation.

7.5.3 Targets will typically be reviewed at least on a biennial basis following monitoring surveys. Should targets not be met, then the occupier will consider whether additional incentives could be introduced, contingency measures put in place or re-based targets agreed as below.

Monitoring

7.5.4 The monitoring of progress towards individual mode share targets will be the responsibility of the Individual Travel Plan Coordinators and representatives. The results of these individual monitoring exercises will be submitted to the site wide Travel Plan and Mobility Coordinator who will assess progress towards the overall Framework mode share target at least on a biennial basis. The overall responsible lies with the site wide Travel Plan and Mobility Coordinator who will ensure that all individual TPCs are working together to achieve the site wide targets.

7.5.5 It is envisaged that the first monitoring would commence six months after first occupation then at least biennially thereafter, subject to reasonable levels of occupation being achieved (min 100 employees, for example).

7.5.6 These monitoring exercises will take the form of simple travel surveys in accordance with SCC guidance. They will endeavour to achieve the required minimum 40% SCC response rates.

7.5.7 Surveys will be undertaken at the same time of year to allow for more reliable comparation and avoid the influence of seasonal variation.

7.5.8 Upon completion of the monitoring the results will be analysed by the site wide Travel Plan and Mobility Coordinator and submitted to the SCC Travel Plan Team. Following each survey a review of the targets and measures will be undertaken and adjusted if necessary to improve performance.

Contingency Plans, Ownership and Handover

7.5.9 Each occupier required to prepare a travel plan will detail within their Individual Site-specific Travel Plan their proposed contingency measures should target mode shares not be met.

In the event of significant variation from the target mode share values, the site wide Travel Plan and Mobility Coordinator, working with the Individual Travel Plan Coordinators, will review the significance of the impact of any deviation from the mode share target and, if necessary, agree which previously identified contingency measure(s) could be implemented further to reduce car use and meet the forecast outcomes over an agreed period of time i.e. when monitoring has been undertaken in Year 1, 3 and 5, monitoring may be required to continue beyond this.

8 Implementation Programme and Responsibilities

8.1 Introduction

8.1.1 The implementation strategy outlined in this section builds upon the overall Development Proposals and transport measures (outlined in **Section 4**) providing the implementation programme for the FTP and the delivery of individual measures.

8.2 Implementation Programme

8.2.1 At this early stage, a simplified programme for the implementation of the FTP and associated Individual Travel Plans is summarised in Table 8-1.

Development Phase	Strategy
Early Construction Phase (Before First Occupation)	Appoint the site wide Travel Plan Mobility Coordinator
	Implement 'hard' measures associated with each phase of the Development scheme, Site design and layout (i.e. cycle parking facilities and electric charging points)
	Liaise with public transport operators to agree the phasing and routing of the proposed public transport services, and to discuss related matters including adequacy of cycle parking at major transport nodes including Bridgwater station.
	Meet with the Development Transport Consultant/Council officers and discuss /agree planned measures
	Submit and agree any Individual Site-specific Travel Plans
	Implement pre-occupation Travel Plan Measures
	Appoint Individual Site-specific Travel Plan Coordinators where possible
Continued Construction and Moving-in Phase	Co-ordinate the monitoring / review of travel mode share. Undertake travel surveys and traffic surveys 6 months after full occupation
	Review the usage and convenience of facilities (i.e. cycle parking/ car club access.)
	Continue to promote the Framework Travel Plan / Residential Travel Plan / Individual Site-specific Travel Plans creating the Development branding and identify and increasing awareness.
	Implement Continued Construction Measures.
	Continue to implement and review the measures set out in the Framework Travel Plan / Residential Travel Plan / Individual Site-Specific Travel Plan.
Ongoing towards full occupation	Carry out travel surveys annually. Monitor results against targets.
	Monitor car parking and bicycle parking use as well as other facilities/services
	Monitor bus service provision and uptake

Table 8-1 Implementation Strategy

8.3 Implementing the Framework and Individual Travel Plan Measures

8.3.1 The measures included within the FTP (as described at **Section 4**) will need to be reviewed and specific measures for any specific occupier/ development proposal will need to be identified for all future LDO Compliance Applications.

8.3.2 It is proposed that each measure should be clearly defined and described in respect of:

- The FTP Objective it relates to;
- Description of the travel plan measure;
- Confirm who is responsible for delivery;
- Clearly stated timescales for delivery.

8.3.3 These measures will be continuously monitored and reviewed. New measures may arise through suggestions obtained by the survey process. Any new measures will be added to the existing list where appropriate and viable.

8.4 Site Wide Travel Plan Mobility Coordinator – Roles and Responsibilities

8.4.1 The appointment of site wide Travel Plan Mobility Coordinator at Gravity has been assumed on a full-time basis.

8.4.2 The main responsibilities of the site wide Travel Plan Mobility Coordinator are set out below, but will be amended / reviewed on a regular basis:

- To issue this FTP for guidance to every relevant major occupier;
- Provide guidance to occupiers and operators regarding the overall Gravity transport strategy and development of their own Individual Site-Specific Travel Plans;
- To act as a broker between stakeholders (i.e. residents, businesses and transport providers) so travel needs are raised, and appropriate solutions are delivered;
- To compile and maintain a ‘best practice’ list of measures and techniques;
- To coordinate the timescales for the collection of monitoring data and to provide guidance to the individual coordinators on arranging travel monitoring surveys;
- To arrange templates of travel diaries and staff survey questionnaires as part of the monitoring system, if required;
- To coordinate the collection of annual review reports from the coordinators;
- Undertake regular liaison with SCC and the public transport operators so the needs and requirements of the occupiers and residents are available to the operators in developing their services; and
- Undertake reviews of the FTP and assess the progress towards achieving objectives.

9 Management, Monitoring and Review

9.1 Introduction

9.1.1 This FTP has been prepared as an over-arching document that sets out an overall strategy for Gravity to help promote and encourage more sustainable modes of travel from the outset.

9.1.2 The FTP is intended to deliver a level of proactive management of transport at the site that will reduce reliance on SOV use.

9.1.3 The FTP forms part of the Gravity transport strategy, as outlined in **Section 4** of this FTP, to support access and movement to, and movement within, the Gravity development seeking to maximise opportunities for travel by sustainable modes whilst minimising residual highway impacts.

9.1.4 The Gravity development proposals and supporting transport measures have been identified through the use of a Scenario Testing tool, briefly explained at **Section 4.5** of this FTP and explained more fully within the TA prepared under separate cover. This approach has been used to identify a 'Core Scenario' for testing which is based around the identified package of supporting mitigation measures.

9.1.5 The 'Core Scenario' (and BAU scenario) is based upon a single set of development land use assumptions reflecting the LDO 'description of development' outlined at **Section 4.4** of this FTP.

9.1.6 From this single set of land use assumptions and through consideration of a range of transport intervention scenarios, an outline package of mitigation measures has been identified to support the Gravity development proposals as defined by the 'Core Scenario'.

9.1.7 These measures are summarised in **Table 9-1** and range from on-site proposals including a mix of land uses proposed to minimise travel, prioritisation of movement within the site by sustainable modes and managing parking, through to off-site proposals including improved bus services to the site and off-site pedestrian/cycle, micro mobility and highway infrastructure improvements; and the implementation of this FTP (measure ID 6 in Table 9-1).

ID	Measure
1	Mix of Land Uses (1): Advanced Manufacturing Shift Pattern: shift change avoiding AM and PM peak hours
2	Mix of Land Uses (2): Access to supporting (e.g. retail, leisure, health) land uses limited to employees and/or on-site residents only, with the exception of the 37 Club retained for use/access in line with existing arrangements
3	Mix of Land Uses (3): Residential development to be subject to appropriately worded conditions linking occupation to employment on site
4	On-site design and infrastructure: Delivery of on-site proposals in accordance with the supporting Design Guide and LDO Parameter Plans including on-site micro mobility connections (NB rail proposals remain subject to separate consideration / occupier demand and are not assumed to be delivered as part of the 'Core Scenario' outlined within this report)
5	Implementation of a Car Parking Management Plan to determine the amount of parking provided on site, type of (e.g. car share, disabled access, EV charging and visitor provision) and location of parking, access to parking and any potential parking charges for use of parking on site
6	Implementation of a Framework Travel Plan (submitted under separate cover) with monitoring regime to achieve preliminary modal shift targets and supporting mechanisms for securing additional sustainable transport measures as required
7	Improved bus service(s) to the site incorporating enhanced main A38 corridor bus services and/or dedicated Demand responsive Transit (DRT) minibus / e-bus services for employees to align with shift patterns
8	Support delivery of SCC/SDC supported off-site pedestrian/cycle improvements deliverable within SCC, NH and/or SDC land improving access to/from the Gravity site to Bridgwater Town Centre and/or Bridgwater Train Station
9	Support delivery of SCC/SDC supported off-site highway capacity and/or safety improvements deliverable within SCC, NH and/or SDC land improving access to/from the Gravity site and commensurate with the scale of peak period development impacts

Table 9-1 Proposed Package of Transport Mitigation Measures

9.2 Securing Delivery of the FTP and Occupier Travel Plans

9.2.1 There remains significant uncertainty around the future transport impacts of the Gravity development proposal given the very nature of an LDO application with broad development parameters outlined at this stage rather than occupier led fixed requirements. For example, it is not currently known who the final occupiers of the site will be, what the final scale and type of development will be or whether it will be delivered on a phased basis.

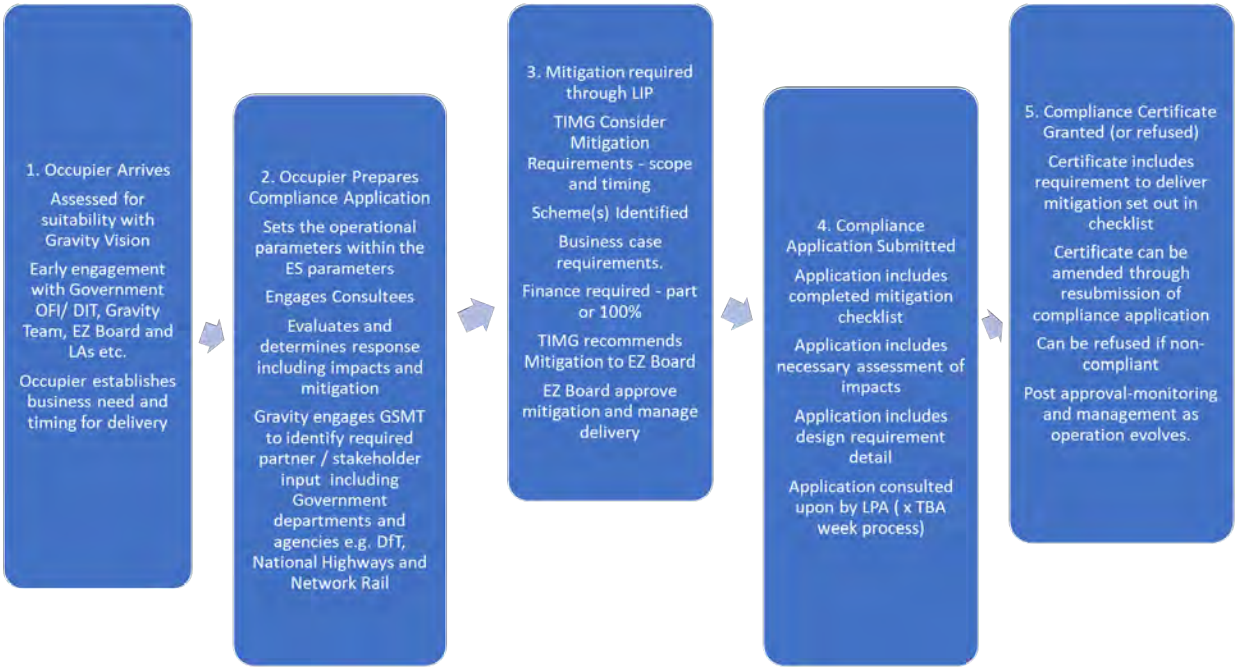
9.2.2 The measures identified in **Table 9-1** are therefore considered to be required to support/mitigate the Gravity development proposals as defined by the single set of land use assumptions used within the assessment referenced in this FTP and as detailed in the TA under separate cover. Accordingly, they represent an outline package of measures that are likely to be required for a development of this scale/type but remain subject to review following confirmation of the development proposals required by the end occupier and managed through future LDO Compliance Applications.

9.2.3 It is anticipated that the measures outlined in **Table 9-1** will be incorporated into a broader LDO Mitigation Checklist against which any future LDO Compliance Application will be assessed with supporting evidence required to demonstrate which measures are required, which measures are not required and how they will be delivered.

9.2.4 All LDO Compliance Applications will therefore need to demonstrate what specific mitigation is required with reference to each of the 9 numbered items in **Table 9-1** with the details and

scale of any mitigation linked to the type/scale of the development proposed within the respective LDO Compliance Application.

9.2.5 At the time of writing, it is anticipated that the LDO Implementation and Compliance Processes are likely to require the following broad stages in respect to defining the appropriate transport mitigation for any given LDO Compliance Application:



9.2.6 It is anticipated that all future LDO Compliance Applications will need to demonstrate conformity with this FTP through confirmation that developer responsibilities have been met (e.g. appointment of a site wide Travel Plan Mobility Coordinator) as well as the preparation of occupier specific Workplace and/or Residential Travel Plans.

9.2.7 With reference to the process outlined above, at Stage 1 and upon confirmation of an end occupier(s) the development proposal and land use details will be more certain including better defined site-specific workforce details (e.g., workforce catchment areas, shift patterns etc etc) against which the respective development travel demands can be re-assessed alongside the occupier specific Travel Plan requirements.

9.2.8 There will then be a requirement at Stage 2 for the preparation of an LDO Compliance Application during which it is anticipated that the following activities will be required:

- Confirmation of the development proposals including confirmed scale of land use and employee numbers / workforce details (including any proposed working hours/shift patterns and employee catchment areas);
- Engagement with key stakeholders as appropriate including NH, NR and SCC;
- Scoping of assessments to re-assess potential development impacts including re-assessment using the assessment approach incorporated within this report or alternative assessment approach as agreed with key stakeholders as appropriate including NH and SCC;

- Identification of a revised set of Compliance Application specific travel demands, target mode shares and supporting mitigation measures including confirming conformity with the FTP and preparation of occupier specific Workplace and/or Residential Travel Plans.

9.3 The Need to Monitor, Manage and Review

9.3.1 The monitoring, management and review of the FTP and of the Individual Site-Specific Travel Plans is a key aspect of the process so the plans remain dynamic documents. The monitoring is required to:

- Understand the total number of trips generated by the Proposed Development and the choice of travel means;
- Understand the effectiveness of travel plan measures as they are introduced;

9.3.2 Plans would be monitored and adjustments would be considered to targets and measures in the light of changes and or successes and any failures within the Travel Plan process and or external changes in circumstance.

Monitor and Manage

9.3.3 Fundamental to the success and effectiveness of the integrated mitigation measures is the requirement to set overall trip/movement targets by mode and to monitor against the effectiveness of the measures to ensure that Gravity is on track to deliver against the targets. This will be achieved through the preparation and implementation of a broader site Monitor and Manage Plan.

9.3.4 The measures detailed in **Table 9-1** are proposed to limit travel demands arising from the development proposals and seek to achieve preliminary modal shift targets and to limit network traffic impacts in the traditional weekday AM and PM peak periods.

9.3.5 As part of future LDO Compliance Applications, it is anticipated that any specific mitigation measures required to support delivery would be linked to an ongoing Monitor and Manage arrangement to track if the actual operational development travel demands are in line with the predicted demands.

9.3.6 At this stage it is anticipated that the primary monitoring mechanism in respect of mitigation measures (ID 1 to 8 within **Table 9-1**) will be to monitor off-site multi-modal trips to assess actual trip generation against the identified preliminary mode share targets set out in **Table 9-2**. The monitoring methodology and frequency for reporting would be set out as part of any future LDO Compliance Application, and will need to allow for an agreed time period by when the agreed targets should be expected to be met from 1st occupation.

9.3.7 In addition to this, any requirement for site-specific highway capacity or safety improvements (ID 9 within Table 9-1) is anticipated to be required only if the actual car driver mode share exceeds the preliminary mode share target for off-site multi-modal trips and if peak period highway impacts exceed the peak period vehicle trip generation set out in Table 9-3. The monitoring methodology and frequency for reporting would be set out as part of any future LDO Compliance Application, and will need to allow for an agreed time period from when the agreed targets should be expected to be met from first occupation.

9.4 FTP Monitoring and Review Schedule

9.4.1 Travel Plans are living documents that require monitoring, reviewing and updating in order to maintain current best practice and address any new issues that may arise during implementation.

9.4.2 The monitoring plan will be developed as the planning process continues. However, it is likely that there will be an initial requirement of undertaking baseline Travel Plan surveys within 3 months of occupation to establish baseline mode share, followed by full surveys at least biennially in Years 3 and 5 thereafter.

9.4.3 These surveys will be undertaken using the SCC travel survey templates or an alternative agreed format within 3 months of occupation and targets reviewed in light of the results.

9.4.4 It is intended that travel surveys will be carried out within 3 months after occupation for each land use. However, the timings of these individual land-use surveys will need to be varied in due course so that surveys for all elements of the Proposed Development are carried out at the same time. Monitoring should be undertaken during neutral months where possible (e.g. not during school holiday periods).

9.4.5 The monitoring of progress towards the individual journey to work mode share target (and any further targets included within Individual Site-specific Travel Plans) will be the responsibility of the Individual Site-specific Travel Plan Coordinators. Monitoring of the overall FTP targets will be assessed by the site wide Travel Plan Mobility Coordinator through the collation of monitoring data from the Individual Site-specific Travel Plan Coordinators. This will enable an overall review of the effectiveness of the FTP and the Individual Site-specific Travel Plans to be undertaken.

9.4.6 The site wide Travel Plan Mobility Coordinator will co-ordinate and liaise with key stakeholders including SDC/SCC over this monitoring process and review. If targets are not being met, a review of the measures will be carried out and new measures investigated where practicable and viable to encourage further modal shift.

9.4.7 The results of the monitoring will be submitted to SCC within one month following the completion of the surveys.

9.4.8 The monitoring will also provide information about public transport operational performance and uptake. This information will inform any operational changes that might be beneficial to local bus services.

9.5 Contingency Measures

9.5.1 In the event of significant variation from the forecast values for a sustained period of time, the site wide Travel Plan Mobility Coordinator will consider the desirability of implementing contingency measures. These measures may include:

- Alterations to the public transport services to better meet demand including the potential for dedicated minibus transport for employees where areas of towns and villages are not effectively served by public transport or commercial DRT;
- Discounted public transport tickets for a limited period of time by agreement with operators;
- Additional car parking management through extensions to controlled parking zones or on-site enforcement;
- Membership discounts to the car share scheme or the potential on-site car club;
- Increased travel behaviour change initiatives such as travel awareness campaigns; and
- Consideration of further on-site traffic management and access control measures to discourage car use;

- Personalised travel planning.

9.5.2 If targets are not met at the end of the 5 year monitoring period discussions will be undertaken with SCC to determine if further monitoring is required.

Locality Investment Plan

9.5.3 Should there be a requirement for further mitigation there will also be the opportunity to seek delivery of additional transport improvements including those set out within the LDO Locality Investment Plan.

9.5.4 The draft LDO Locality Investment Plan sets out high level potential schemes which may be required to realise the full delivery of the EZ and to mitigate the potential impacts of the LDO including aspects forming part of this FTP.

9.5.5 An overarching EZ Board will be formed, along with two sub groups, one of which will be a Transport and Infrastructure Management Group (TIMG).

9.5.6 The TIMG will be established to lead and co-ordinate transport and infrastructure related matters in respect of Gravity mobilisation and implementation. In particular in respect of infrastructure delivery, and the monitoring and management of the transport effects of the project. This will be achieved through oversight of the FTP, individual occupier travel plans, and related construction traffic management plans.

9.5.7 Infrastructure may include for example, transport infrastructure including road, rail, public transport, walking and cycling, as well as EV charging, utilities e.g. grid strengthening; and digital.

9.5.8 The funding and delivery of mitigation and wider infrastructure investment measures will be multifaceted and may come from various sources and over various timescales. This may be via Government funds, NH direct activity, local authority led bids for Community Renewal and Levelling Up Funds and the Town Deal, which may have direct and indirect effects on the Gravity project.

9.5.9 Arrangements for implementation of the measures referred to here will be found variously in the LDO Design Guide, the LDO itself and any s106 agreement connected to the LDO.

9.5.10 In respect of the early need for infrastructure delivery ahead of development, it is possible that through the LDO Locality Investment Plan the market may choose a more incremental solution, with challenging infrastructure and timing needs, and this may require loans in advance, refunded through business rates income.

9.5.11 The Transport authority will be an integral member of the TIMG and will be responsible for commissioning and implementing schemes and mitigation measures to improve outcomes and reduce impacts, funded via the locality investment plan and retained business rates from the enterprise zone. The challenge will be for the local authority to commission and deliver schemes in a timely way to manage and reduce impacts.

9.5.12 As local government review proceeds and a new unitary is established in 2023 it is essential to build a team to ensure continuity and to maintain momentum in delivery. There will be no separation between the planning enforcement authority, previously a district function, and the highway authority, so a one team approach will ensure a seamless approach to monitoring and management and mitigation delivery.

9.5.13 A number of potential transport schemes are included in the LDO Locality Investment Plan including:

- On-site schemes, including:
  - Establishing a revolving infrastructure fund to accelerate site preparation, and to be refunded by business rates to expedite commissioning and delivery.
  - On site strategic transport priorities: estate roads and mobility network linked to the transport assessment
  - Rail restoration and station
  - Multi story car parking with integral EV Charging
  - Any other initiative included within the Framework Travel Plan not defined elsewhere
  - Smart mobility hubs
- Off-site schemes, including:
  - High frequency bus services to Gravity (linked to transport assessment)
  - M5 J23 Strategic improvement (linked to transport assessment)
  - Active travel improvements across Bridgwater: Bridgwater to Gravity walking and cycling links (including A38 and A39 corridors) linked to transport assessment
  - Other potential transport improvements on the Major Road Network / Local Road Network, including Dunball Rbt and the A38 / A39 corridors
  - Park and ride facilities
  - Smart Mobility Hubs within Bridgwater (linking to Gravity)
  - Burnham on Sea / Highbridge to Gravity walking and cycling improvements
- Innovation, Skills and Training, including:
  - Innovation / SME space related to supply chain development
  - Drone / EVTOL logistics - trials / business case development
- Minor Improvement Projects, including:
  - Walking and cycling enhancements within the villages of Puriton / Woolavington
  - Enhanced Puriton / Woolavington signage / wayfinding
- Locality Projects, including:
  - EV Infrastructure in Bridgwater
  - Bridgwater Rail Station Accessibility Enhancements
  - Digital investment – superfast broadband, 5G

- Mass transport connectivity to Bristol Airport from Gravity and Bridgwater

- Admin and Governance, including officer time including statutory consultations, Transport and Infrastructure Manager

Figures

[redacted]

Client

This is Gravity Ltd.

Gravity

Site Location Plan / LDO Boundary Plan

0 0.5 1 km

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Drawn: GS	Checked: TL
Figure 01	Rev A

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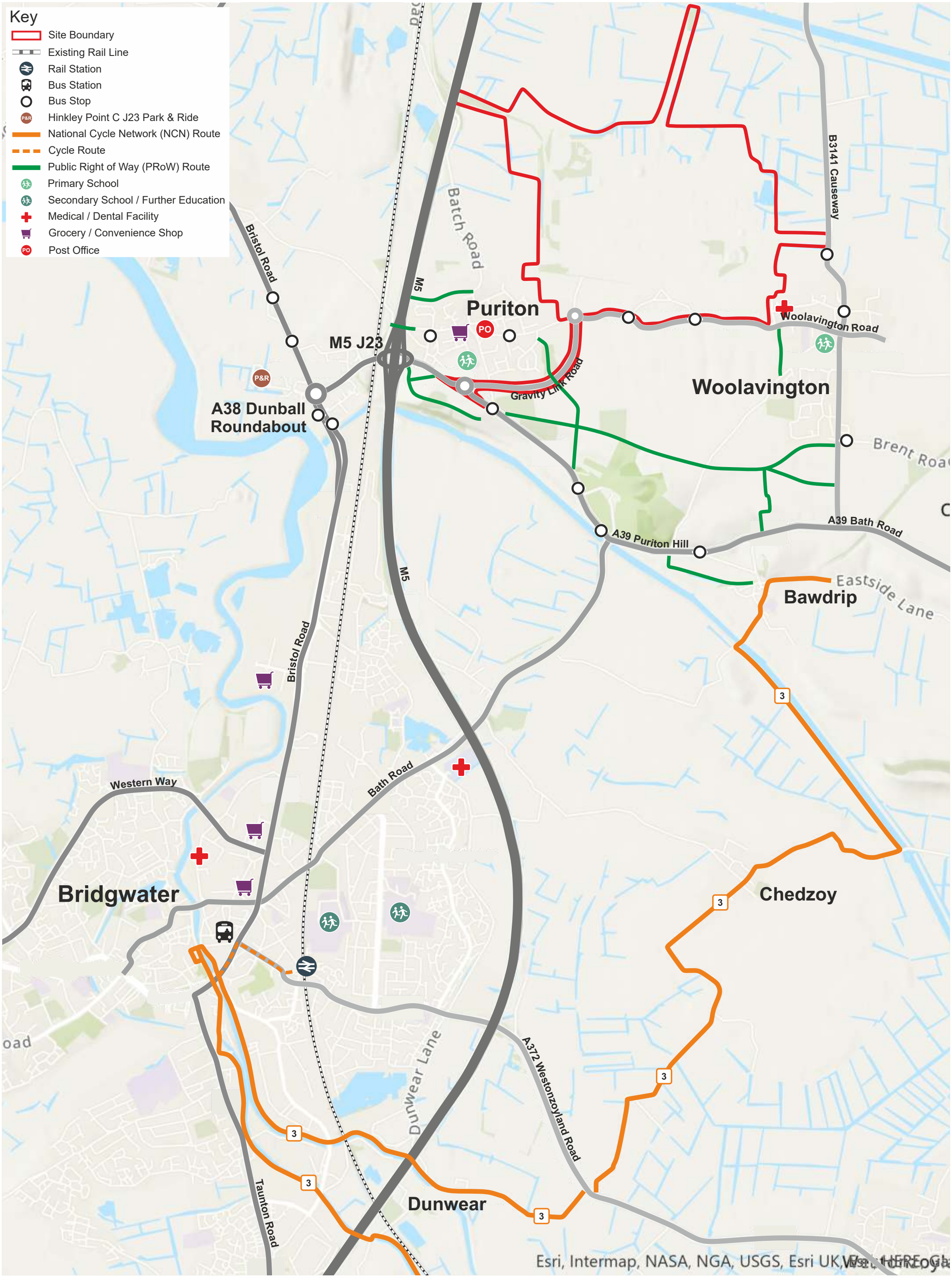


Gravity

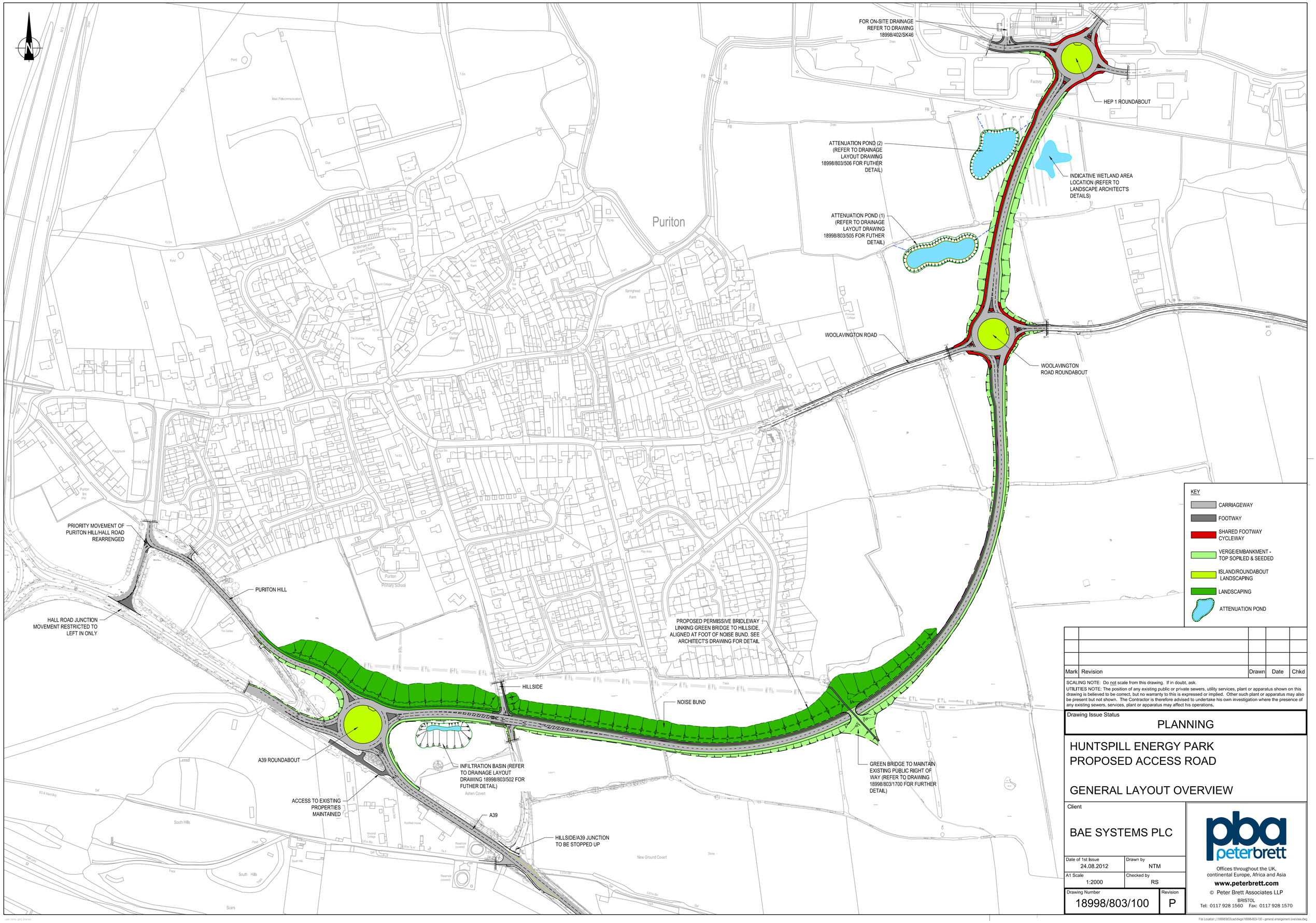
Gravity
Site Local Context

Drawing Status
Drawing: **Figure 2**
Date: 14/10/21
Drawn by: NL
Checked by: CM

Stantec

\\pba.int\bri\Projects\49102 Gravity LDO\Transport\COREL\DiT/Figure STN1 _Rev A - Strategic Road Network

Appendix A Gravity Link Road Scheme



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Drawing Issue Status

PLANNING

HUNTSPILL ENERGY PARK PROPOSED ACCESS ROAD

GENERAL LAYOUT OVERVIEW

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BAE SYSTEMS PLC

Date of 1st Issue 24.08.2012	Drawn by NTM
A1 Scale 1:2000	Checked by RS
Drawing Number 18998/803/100	Revision P

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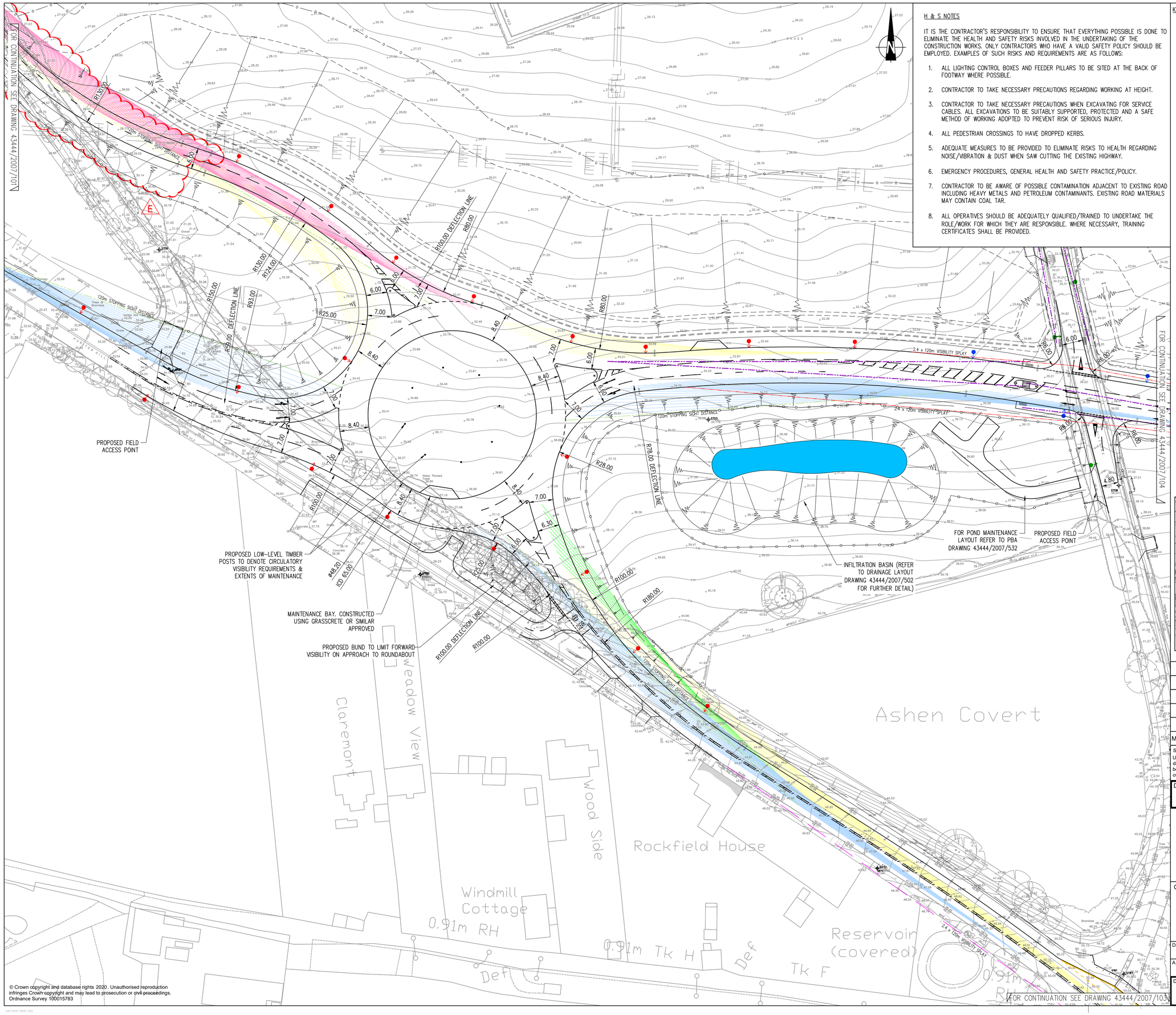

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4. ALL PEDESTRIAN CROSSINGS TO HAVE DROPPED KERBS.
5. ADEQUATE MEASURES TO BE PROVIDED TO ELIMINATE RISKS TO HEALTH REGARDING NOISE/VIBRATION & DUST WHEN SAW CUTTING THE EXISTING HIGHWAY.
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KEY

- 10 METRE COLUMN TO SCC SPECIFICATION TECEO 2 – TCO2_88LED_NEUT_WH_O_5098_312701 LAMP 88LED_NEUT_WH_O_500mA
- 10 METRE COLUMN TO SCC SPECIFICATION TECEO 1 – 5098–40 LEDS 500mA NW FLAT, GLASS EXTRA CLEAR, SMO LAMP 40 LEDS
- 8 METRE COLUMN TO SCC SPECIFICATION AXIA–AXIA/5078/CLEAR P./24LEDS 350MA NW (3.6 KLM) 29/31312F LAMP 24LEDS 350mA NW (3.6KLM)
- VISIBILITY TO PEDESTRIAN CROSSING POINTS DMRB TD 16/07 PARAGRAPH 8.12
- VISIBILITY ON APPROACH TO ROUNDABOUT (SSD) 120m
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- ILLUMINATED BOLLARD

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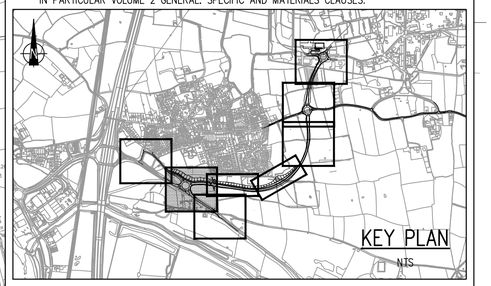
9. STREET LIGHTING DESIGN UNDERTAKEN BY SOMERSET COUNTY COUNCIL, RECEIVED ON 31.10.2016. SUBSEQUENTLY LIGHTING COLUMNS ON A39 ROUNDABOUT RELOCATED FOLLOWING SCC RSA COMMENT RECEIVED ON 21.11.2016.
10. THE SPECIFICATION FOR STREET LIGHTING, ILLUMINATED TRAFFIC SIGNS AND BOLLARDS SHALL BE IN ACCORDANCE WITH THE SCC TERM LIGHTING MAINTENANCE CONTRACT AND IN PARTICULAR VOLUME 2 GENERAL. SPECIFIC AND MATERIALS CLAUSES.



Mark	Revision	Date	Drawn	Chkd	Appd
E	PURITON HILL ALIGNMENT & VISI SPLAY UPDATED	01.10.20	CL	LB	JMH
D	REPLACED KNEE RAIL FENCE WITH TIMBER POSTS	02.03.20	LB	JMH	RAS
C	REVISED FOR CONSTRUCTION	05.08.19	TM	LB	RAS
B	UPDATED ALIGNMENT OF PURITON HILL	14.06.19	AJW	LB	RAS
A	ISSUED FOR TENDER	04.03.19	AJW	JMH	RAS

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Drawing Issue Status

FOR CONSTRUCTION

GRAVITY
PROPOSED ACCESS ROAD
GENERAL ARRANGEMENT
SHEET 2 OF 7

Client

THIS IS GRAVITY LTD

Date of 1st Issue	Designed	Drawn
13.07.2018	JMH	JMH
A1 Scale	Checked	Approved
1:500	LB	RAS
Drawing Number		Revision
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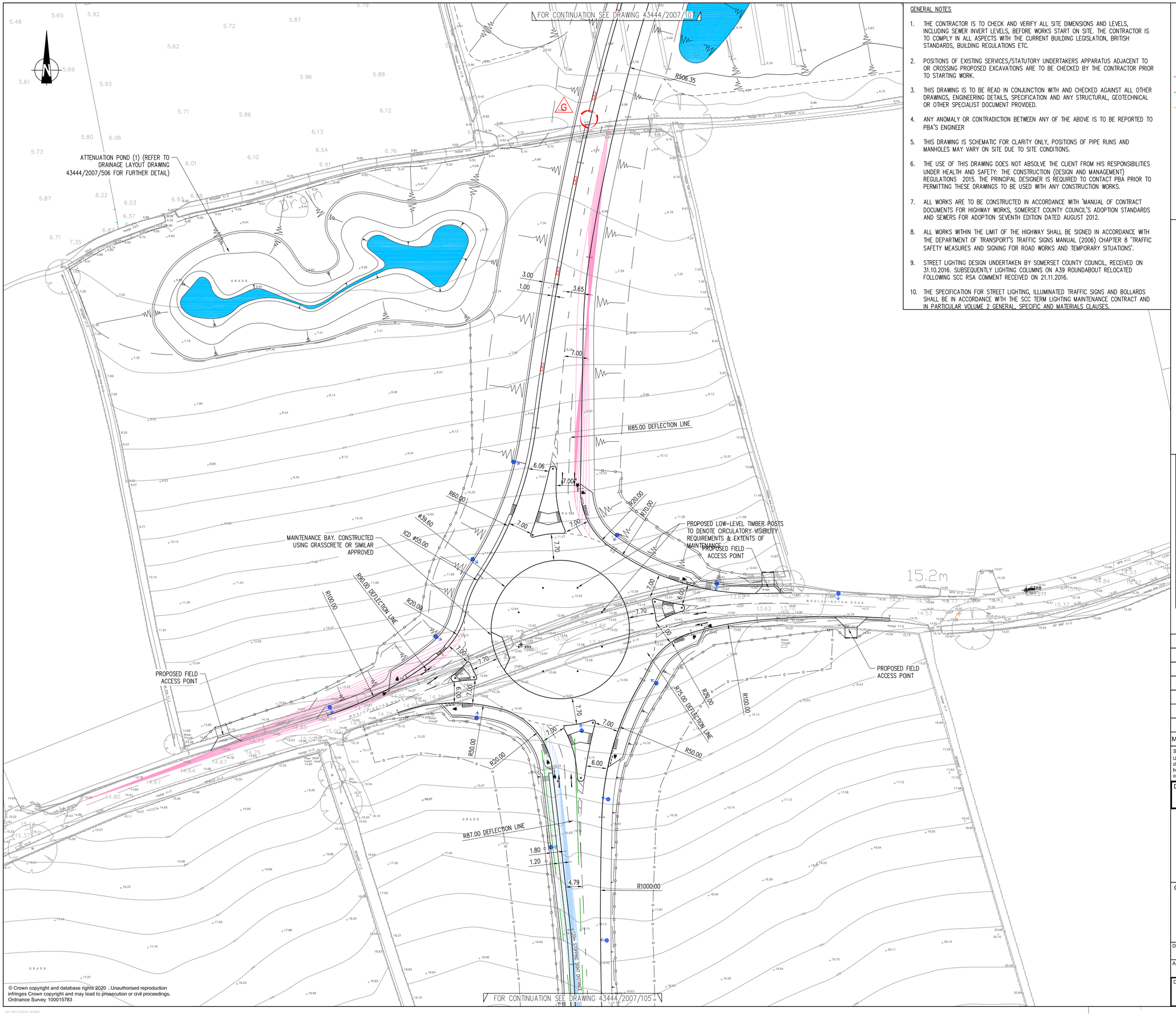

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- PROPOSED RS177 NAL SOCKET WITH TWIN DUCT
- VISIBILITY TO PEDESTRIAN CROSSING POINTS DMRB TD 16/07 PARAGRAPH 8.12
- VISIBILITY TO PEDESTRIAN CROSSING POINT 120m DMRB TA 90/05 TABLES 3.3 & 3.4
- VISIBILITY TO PEDESTRIAN CROSSING POINTS 90m DMRB TA 90/05 TABLES 3.3 AND 3.4
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- VISIBILITY ON APPROACH TO ROUNDABOUT (SSD) 90m
- VISIBILITY ON EXIT OF ROUNDABOUT (SSD) 120m
- VISIBILITY ON EXIT OF ROUNDABOUT (SSD) 90m
- ILLUMINATED BOLLARD
- PROPOSED TACTILE PAVING AND DROPPED KERBS
- PROPOSED CORDUROY PAVING

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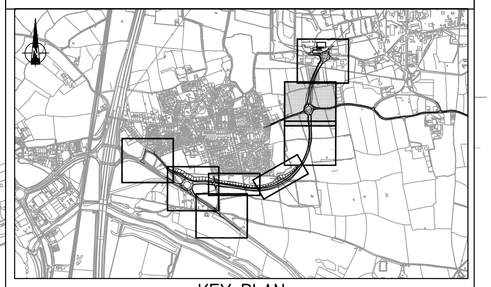
4. ALL PEDESTRIAN CROSSINGS TO HAVE DROPPED KERBS.
5. ADEQUATE MEASURES TO BE PROVIDED TO ELIMINATE RISKS TO HEALTH REGARDING NOISE/VIBRATION & DUST WHEN SAW CUTTING THE EXISTING HIGHWAY.
6. EMERGENCY PROCEDURES, GENERAL HEALTH AND SAFETY PRACTICE/POLICY.
7. CONTRACTOR TO BE AWARE OF POSSIBLE CONTAMINATION ADJACENT TO EXISTING ROAD INCLUDING HEAVY METALS AND PETROLEUM CONTAMINANTS. EXISTING ROAD MATERIALS MAY CONTAIN COAL TAR.
8. ALL OPERATIVES SHOULD BE ADEQUATELY QUALIFIED/TRAINED TO UNDERTAKE THE ROLE/WORK FOR WHICH THEY ARE RESPONSIBLE. WHERE NECESSARY, TRAINING CERTIFICATES SHALL BE PROVIDED.



KEY PLAN

NTS

Mark	Revision	Date	Drawn	Chkd	Appd
G	CROSSING POINT ADDED	13.01.21	ET	LB	JMH
F	NAL SOCKETS ADDED	07.01.21	ET	LB	JMH
E	ADJUSTED POSITION OF LIGHTING COLUMNS	05.11.20	TM	JMH	JMH
D	ADJUSTED POSITION OF LIGHTING COLUMN. TIMBER POSTS	02.03.20	LB	JMH	RAS
C	REVISED FOR CONSTRUCTION	05.08.19	TM	LB	RAS
B	UPDATED BASINS FOLLOWING TRP PROPOSALS	12.04.19	LB	JMH	RAS
A	ISSUED FOR TENDER	04.03.19	AJW	JMH	RAS

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Drawing Issue Status

FOR CONSTRUCTION

GRAVITY
PROPOSED ACCESS ROAD
GENERAL ARRANGEMENT
SHEET 6 OF 7

Client

THIS IS GRAVITY LTD

Date of 1st Issue	Designed	Drawn
13.07.2018	JMH	JMH
A1 Scale	**Checked**	**Approved**
1:500	LB	RAS

Drawing Number	Revision
43444/2007/106	G

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BRISTOL
Tel: 01173 327 840

Appendix B VES Foot/Cycleway

EXISTING ENTRANCE TO ROF SITE

INSET 2
1:500

FOR CONTINUATION SEE INSET 1

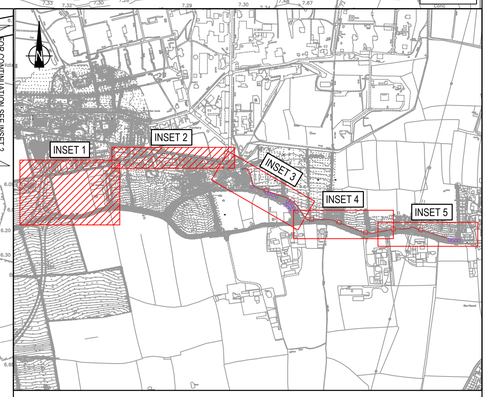
FOR CONTINUATION SEE INSET 2

CONCRETE STEPS WITH WOODEN HANDRAILS TO PROVIDE LINK TO GRAVITY ACCESS RD WITH NEW PEDESTRIAN CROSSING

WOOLAVINGTON ROUNDABOUT

The Paddocks

INSET 1
1:500



KEY:

- HIGHWAY BOUNDARY
- TIMBER POST AND 4 RAIL STOCK PROOF FENCE WITH LED SOLAR UPLIGHTS FOR DETAILS SEE STANTEC DRAWING 43444/2025/SD01
- PROPOSED TREE PLANTING

NOTES:

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2. FOR LONG SECTIONS SEE STANTEC DRAWINGS 43444/2025/161 - 162
3. ALL DIMENSIONS ARE IN METRES UNLESS STATED OTHERWISE.
4. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT CONTRACT DRAWINGS, CONSTRUCTION DETAILS AND SPECIFICATIONS.
5. DRAWINGS TO BE READ IN CONJUNCTION WITH THE RICHARDS PARTNERSHIP DRAWINGS.

0 10 20
metres

Mark	Revision	Date	Drawn	Chkd	Appd

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Drawing Issue Status

FOR PLANNING

GRAVITY
VILLAGE ENHANCEMENT SCHEME
PURITON VILLAGE
FOOT/CYCLEWAY ENGINEERING LAYOUT

Client

Gravity

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Date of 1st Issue	Designed	Drawn
25.06.2020	LB	ET
A1 Scale	Checked	Approved
1:500	RAS	RAS

Drawing Number	Revision
43444/2025/122	-

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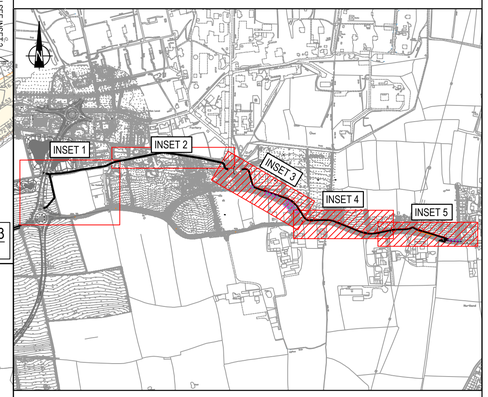

KEY:

- HIGHWAY BOUNDARY
- TIMBER POST AND 4 RAIL STOCK PROOF FENCE WITH LED SOLAR UPLIGHTS FOR DETAILS SEE STANTEC DRAWING 43444/2025/SD01
- PROPOSED TREE PLANTING

NOTES:

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2. FOR LONG SECTIONS SEE STANTEC DRAWINGS 43444/2025/161 - 162
3. ALL DIMENSIONS ARE IN METRES UNLESS STATED OTHERWISE.
4. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT CONTRACT DRAWINGS, CONSTRUCTION DETAILS AND SPECIFICATIONS.
5. DRAWINGS TO BE READ IN CONJUNCTION WITH THE RICHARDS PARTNERSHIP DRAWINGS.

0 10 20
metres

Mark	Revision	Date	Drawn	Chkd	Appd

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Drawing Issue Status

FOR PLANNING

GRAVITY
VILLAGE ENHANCEMENT SCHEME
WOOLAVINGTON VILLAGE
FOOT/CYCLEWAY ENGINEERING LAYOUT

Client

Gravity

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Date of 1st Issue	Designed	Drawn
25.06.2020	LB	ET
A1 Scale	Checked	Approved
1:500	RAS	RAS
Drawing Number		Revision
43444/2025/123		-

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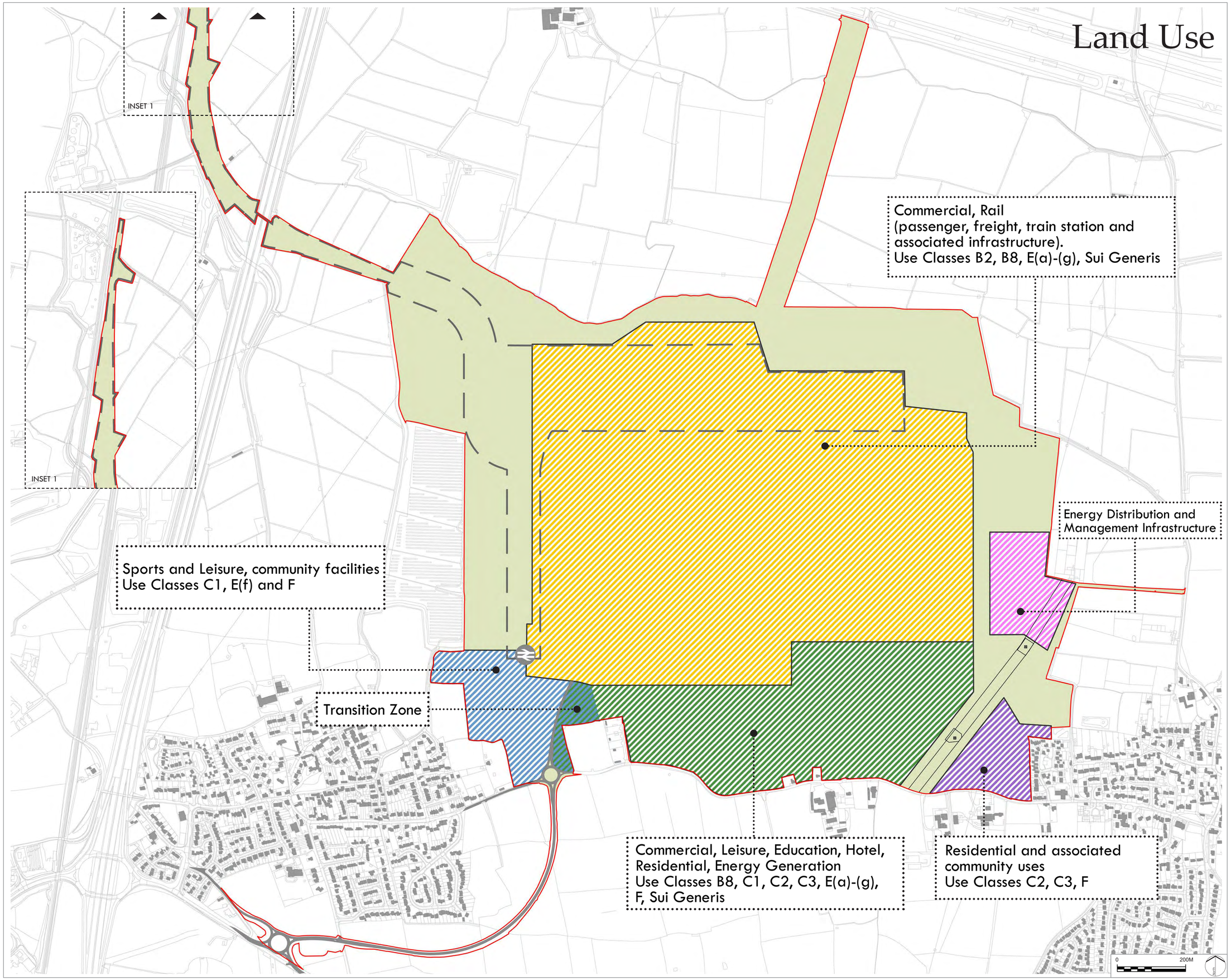
Appendix C LDO Parameter Plans

Z:\6599_Purton_Gravity Masterplan Development\Graphics\Plans_Images\Parameter Plans\6599_PP101_Land Uses.indd

Land Use



LEGEND

- LDO Boundary
- Commercial, Rail (passenger, freight, train station and associated infrastructure). Use Classes B2, B8, E(a)-(g), Sui Generis
- Energy Distribution and Management Infrastructure
- Residential and associated community uses Use Classes C2, C3, F
- Commercial, Leisure, Education, Hotel, Residential, Energy Generation Use Classes B8, C1, C2, C3, E(a)-(g), F, Sui Generis
- Sports and Leisure, community facilities Use Classes C1, E(f) and F
- Transition Zone
- Open space and biodiversity zones Including surface water attenuation features, watercourses, woodland, hedgerows and trees, utilities, occasional vehicular routes and rail line with associated infrastructure.
- Rail corridor - Freight and Passenger, and associated infrastructure
- Passenger Station (indicative location)

REV.	DESCRIPTION	APP.	DATE
L	Changes to title block	RF	08.09.21
K	Key updated	RF	25.08.21
J	Key updated	RF	16.08.21
I	Key updated	RF	16.08.21
H	Key updated	RF	16.08.21
G	Uses zones updated	RF	13.08.21
F	Key updated and train station logo relocated	RF	13.08.21
E	Key updated following comments from IH	RF	08.06.21
D	Key updated following comments from CP	RF	04.06.21
C	Rail corridor; plan inset	RF	03.06.21
B	Use classes	RF	24.05.21
A	Format of key amended	RF	24.05.21
-	First Issue	RF	21.05.21

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PROJECT TITLE
GRAVITY

DRAWING TITLE
PARAMETER PLAN
Land Uses

ISSUED BY	Exeter	T: 01392 260430	
DATE	May 2021	DRAWN	KS/DA
SCALE@A1	1:5,000	CHECKED	RF
STATUS	LDO	APPROVED	FO

DWG. NO. 6599_PP201L

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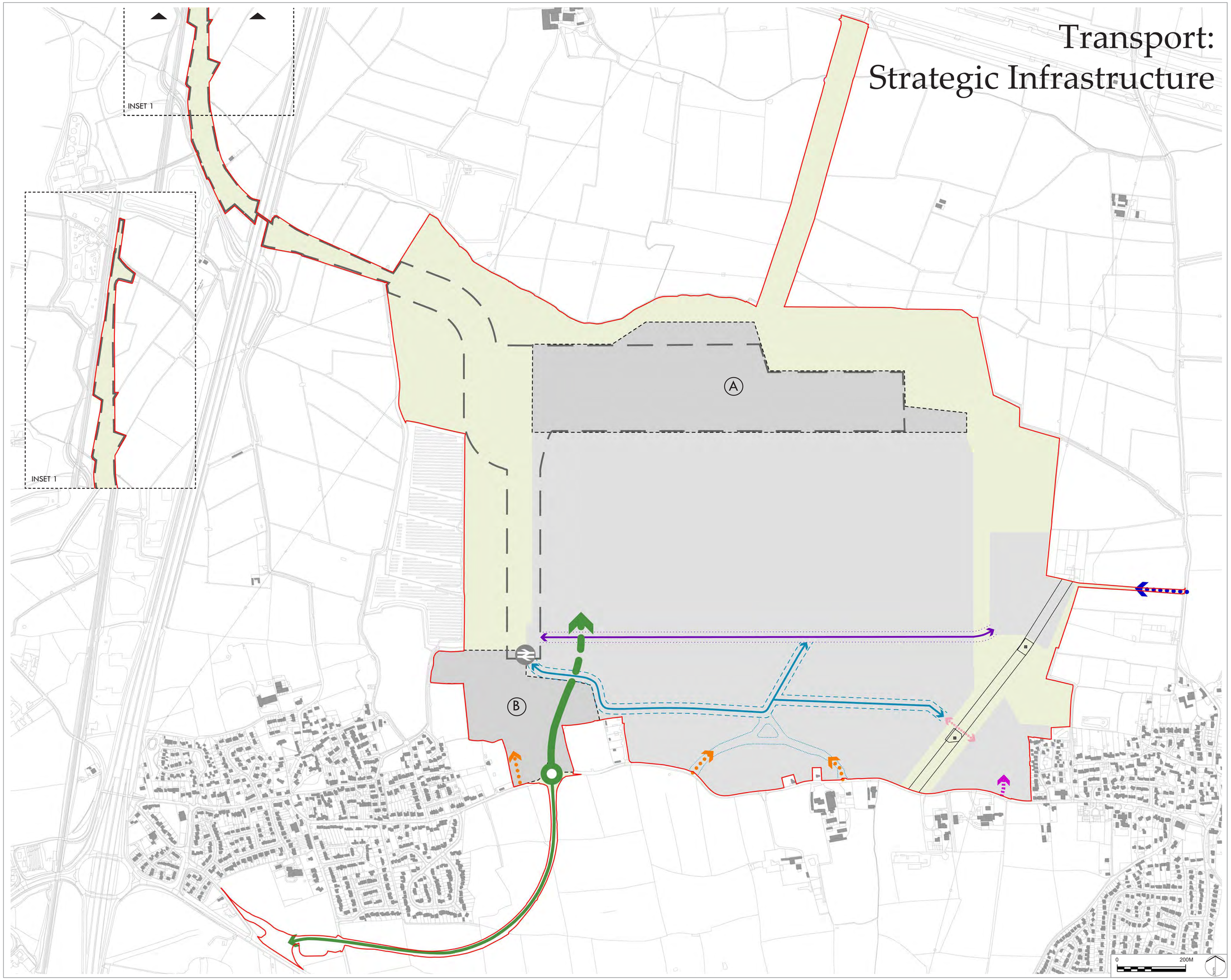
Transport: Strategic Infrastructure



LEGEND

- LDO Boundary
- Primary Road (all modes)
- Link Road (approved)
- Secondary Access (all modes)
- Emergency / operations / pedestrian / cycle access only
- Indicative vehicular crossing
- Residential and smart mobility access
- Transport corridor (Subject to centre line deviation limits of +/- 30m, unless other prevailing stipulations of the parameter plan directly inform alignment of the corridor .
- Primary road corridor (Subject to centre line deviation limits of +/- 50m, unless other prevailing stipulations of the parameter plan directly inform alignment of the corridor).
- Existing road network to be retained
- Rail corridor - Freight and Passenger, and associated infrastructure
- Passenger Station (indicative location)
- Development zone
- Ⓐ velopment zone - Up to 50% of the zone will accommodate buildings, the remainder will be: A) associated infrastructure such as Ⓑ l, including mobile gantry cranes, roads and laydown space and/or green infrastructure. B) blue and green infrastructure, tree nursery, community uses, sports, leisure or associated infrastructure such as roads, footpaths and cycle routes.
- Overhead powerlines 400 kVA

REV.	DESCRIPTION	APP.	DATE
F	Amends to access labelling	RF	09.09.21
E	Changes to title block	RF	08.09.21
D	Train station logo relocated	RF	13.08.21
C	Key updated following comments from CP	RF	04.06.21
B	Changes to development zone; plan inset	RF	03.06.21
A	Format of key amended	RF	24.05.21
-	First Issue	RF	21.05.21

LDĀDESIGN

PROJECT TITLE
GRAVITY

DRAWING TITLE
PARAMETER PLAN
Transport and Movement
Strategic Infrastructure

ISSUED BY	Exeter	T: 01392 260430	
DATE	May 2021	DRAWN	KS/DA
SCALE@A1	1:5,000	CHECKED	RF
STATUS	LDO	APPROVED	FO

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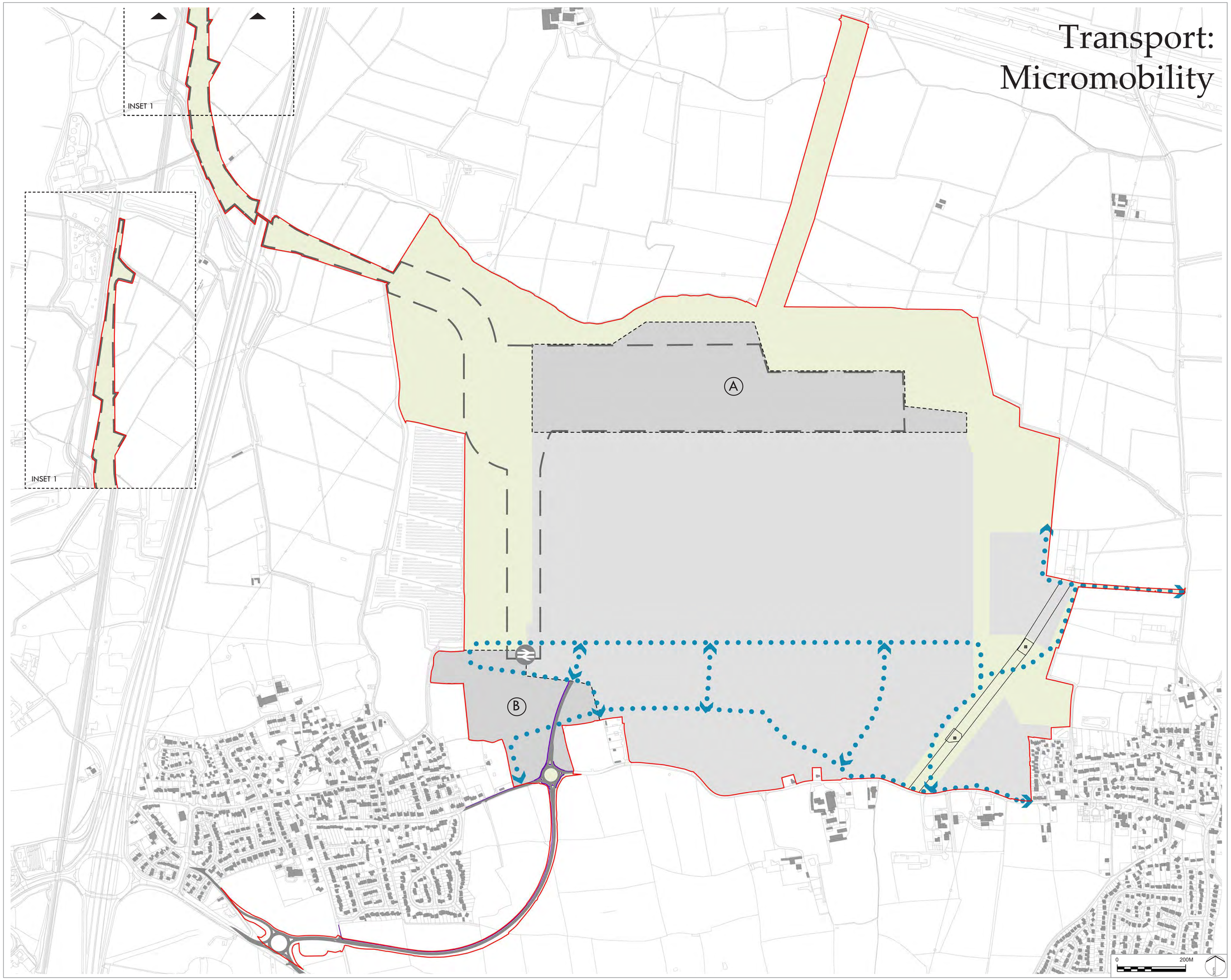
Z:\6599_Purton_Gravity Masterplan Development\Graphics\Plans_Images\Parameter Plans\6599_PP104_Transport Movement Micro Mobility.indd

Transport: Micromobility



LEGEND

- LDO Boundary
- Micromobility connections (including pedestrian and cycle), indicative alignment
- Footpath provided as part of Link Road
- Open space and biodiversity zones including surface water attenuation features, watercourses, woodland, hedgerows and trees, utilities, occasional vehicular routes and rail line with associated infrastructure.
- Rail corridor - Freight and Passenger, and associated infrastructure
- Passenger Station (indicative location)
- Development zone
- Development zone - Up to 50% of the zone will accommodate buildings, the remainder will be:
  (A) associated infrastructure such as rail, including mobile gantry cranes, roads and laydown space and/or green infrastructure.
  (B) blue and green infrastructure, tree nursery, community uses, sports, leisure or associated infrastructure such as roads, footpaths and cycle routes.
- Overhead powerlines 400 kVA

REV.	DESCRIPTION	APP.	DATE
E	Changes to title block	RF	08.09.21
D	Train station logo relocated	RF	13.08.21
C	Key updated following comments from CP	RF	04.06.21
B	Changes to development zone; plan inset	RF	03.06.21
A	Format of key amended	RF	24.05.21
-	First Issue	RF	21.05.21

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PROJECT TITLE
GRAVITY

DRAWING TITLE
PARAMETER PLAN
Transport and Movement
Micromobility

ISSUED BY	Exeter	T: 01392 260430	
DATE	May 2021	DRAWN	KS/DA
SCALE@A1	1:5,000	CHECKED	RF
STATUS	LDO	APPROVED	FO

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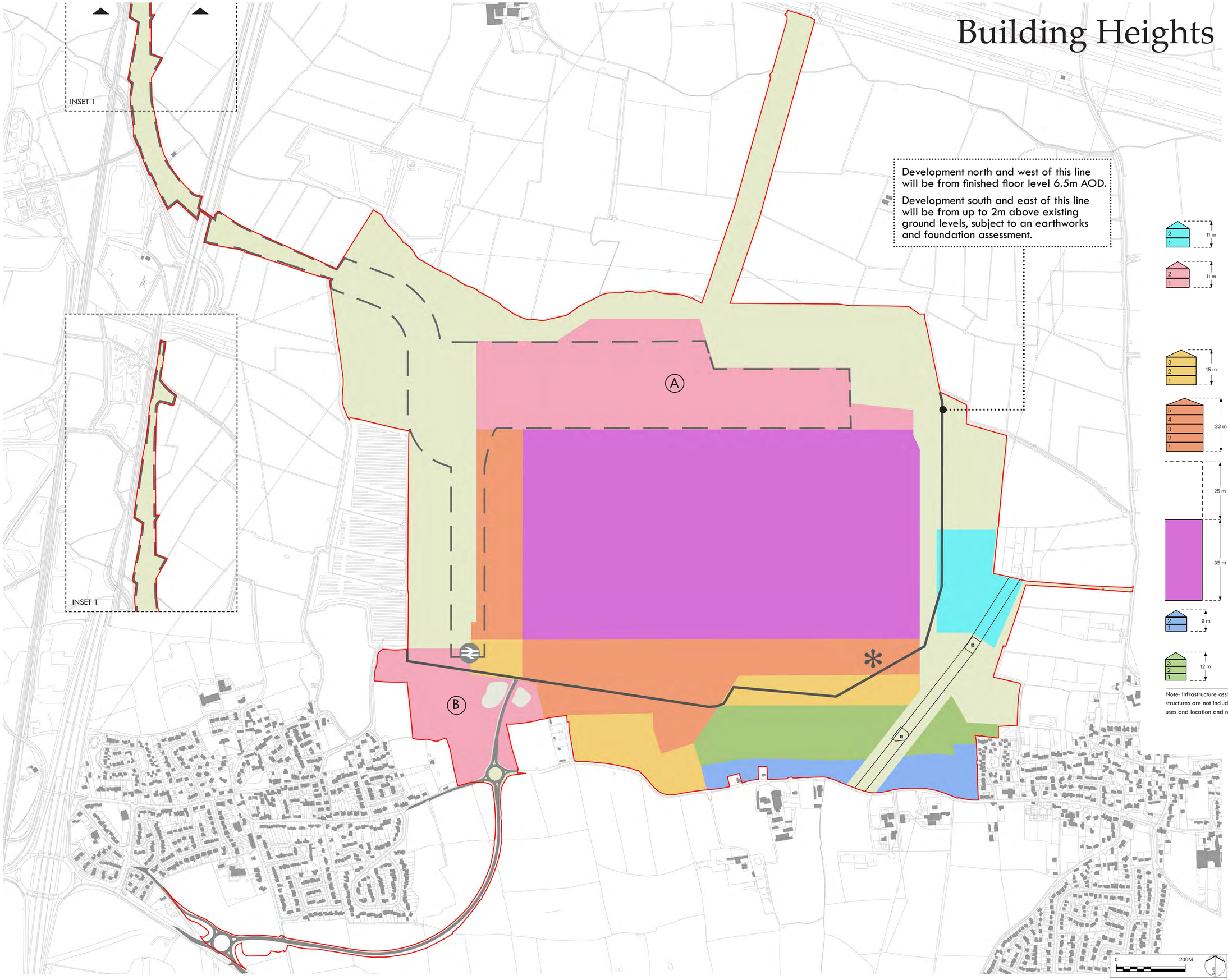
Building Heights



LEGEND

- LDO Boundary
- Open space and biodiversity zones Including surface water attenuation features, watercourses, woodland, hedgerows and trees, utilities, occasional vehicular routes and rail line with associated infrastructure.
- Indicative location for Energy Generation. The height and number of flues associated with the Energy Generation will be determined by dispersion modeling. Typically 3m higher than adjacent building height.
- Rail corridor - Freight and Passenger, and associated infrastructure
- Passenger Station (indicative location)
- Development north and west of this line will be from finished floor level 6.5m AOD. Development south and east of this line will be from up to 2m above existing ground levels, subject to an earthworks and foundation assessment.
- Overhead powerlines 400 kVA
- 2, 1 — 11 m — Up to 11m ridge height from up to 2m above existing ground level.
- 2, 1 — 11 m — Up to 11m ridge height from up to 2m above existing ground level. Up to 50% of the zone will accommodate buildings, the remainder will be: (A) associated infrastructure such as rail, including mobile gantry cranes, roads and/ or green infrastructure. (B) green infrastructure, community uses, sports, leisure or associated infrastructure such as roads, footpaths and cycle routes.
- 3, 2, 1 — 15 m — Up to 15m ridge height from up to 2m above existing ground level.
- 5, 4, 3, 2, 1 — 23 m — Up to 23m ridge height from up to 2m above existing ground level.
- 25 m, 35 m — Up to 35m ridge height from up to 2m above existing ground level. An additional 25m permitted for stacks.
- 2, 1 — 9 m — Up to 9m ridge height, with limited areas (up to 5% of the height zone), of up to 12m ridge height in key locations, from up to 2m above existing ground level.
- 3, 2, 1 — 12 m — Up to 12m ridge height from up to 2m above existing ground level.

Note: Infrastructure associated with utilities and rail such as cranes and other structures are not included within the parameters set out as they are likely to be mobile uses and location and number are to be determined by the end user.

REV.	DESCRIPTION	APP.	DATE
H	Changes to title block	RF	08.09.21
G	Train station logo relocated	RF	13.08.21
F	Key updated following comments from JH	RF	12.07.21
E	Key updated to include +2m for ground reprofiling	RF	09.06.21
D	Key updated following comments from JH	RF	08.06.21
C	Key updated following comments from CP	RF	04.06.21
B	Cranes and rail line; key; plan inset	RF	03.06.21
A	Format of key amended	RF	24.05.21
-	First Issue	RF	21.05.21

LDĀDESIGN

PROJECT TITLE
GRAVITY

DRAWING TITLE
PARAMETER PLAN
Building Heights

ISSUED BY	Exeter	T: 01392 260430	
DATE	May 2021	DRAWN	KS/DA
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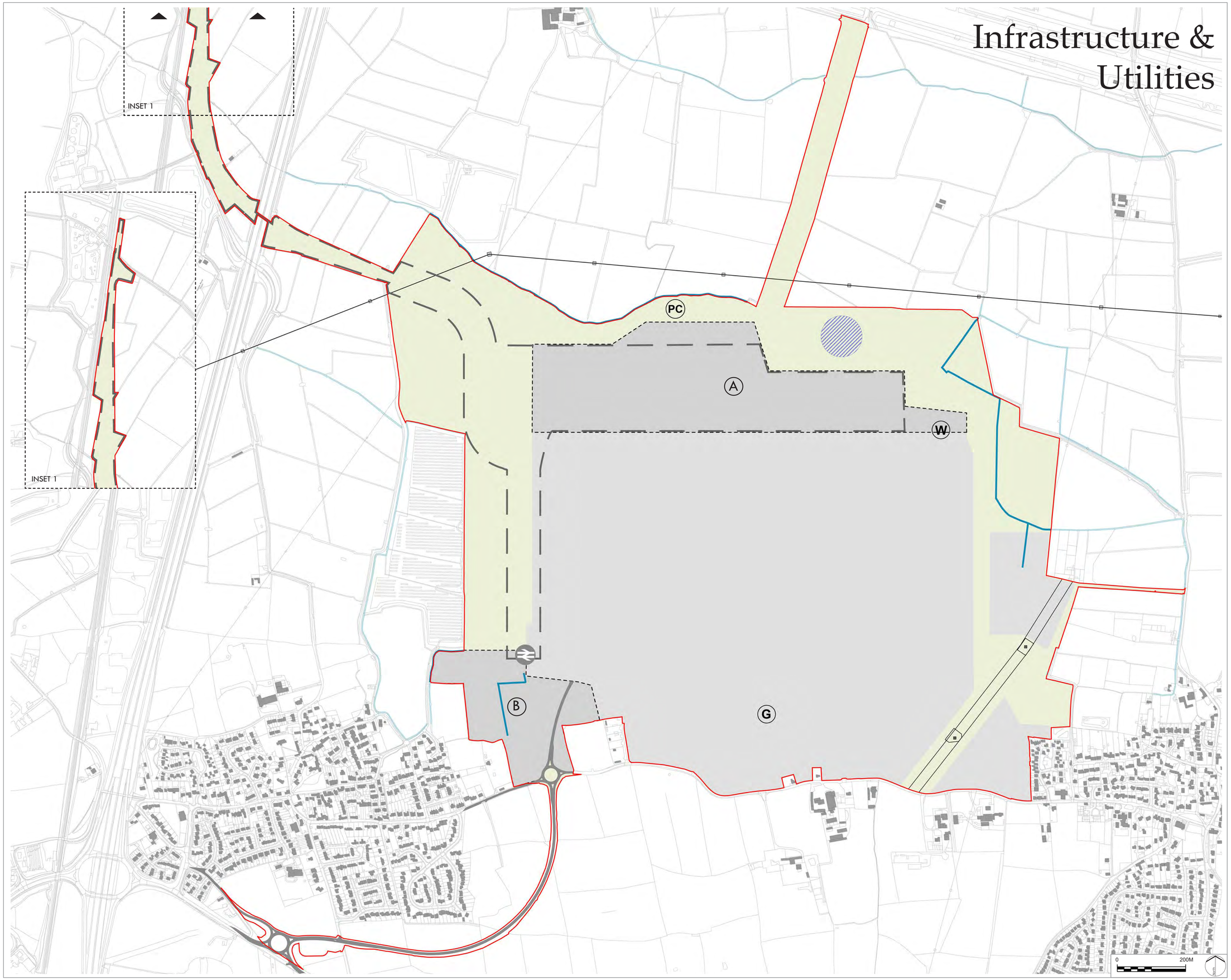
Infrastructure & Utilities



LEGEND

- LDO Boundary
- Existing IDB watercourse to be retained in situ
- Overhead powerlines 400 kVA
- Overhead powerlines 132 kVA
- (W) Water Treatment Works (indicative location)
- Indicative area of water attenuation
- (G) Gas connection
- (PC) Indicative zone for connection to overhead powerlines
- Open space and biodiversity zones including surface water attenuation features, watercourses, woodland, hedgerows and trees, utilities, occasional vehicular routes and rail line with associated infrastructure.
- Rail corridor - Freight and Passenger, and associated infrastructure
- Passenger Station (indicative location)
- Development zone
- Development zone - Up to 50% of the zone will accommodate buildings, the remainder will be:
  (A) associated infrastructure such as rail, including mobile gantry cranes, roads and laydown space and/or green infrastructure.
  (B) blue and green infrastructure, tree nursery, community uses, sports, leisure or associated infrastructure such as roads, footpaths and cycle routes.

REV.	DESCRIPTION	APP.	DATE
E	Changes to title block	RF	08.09.21
D	Train station logo relocated	RF	13.08.21
C	Key updated following comments from CP	RF	04.06.21
B	Key; power lines; plan inset	RF	03.06.21
A	Format of key amended	RF	24.05.21
-	First Issue	RF	21.05.21

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PROJECT TITLE
GRAVITY

DRAWING TITLE
PARAMETER PLAN
Infrastructure and Utilities

ISSUED BY	Exeter	T: 01392 260430	
DATE	May 2021	DRAWN	KS/DA
SCALE@A1	1:5,000	CHECKED	RF
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DWG. NO. 6599_PP205E

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Z:\6599_Purton_Gravity Masterplan Development\Graphics\Plans_Images\Parameter Plans\6599_PP107_Strategic Landscape.indd

Strategic Landscape

LEGEND

- LDO Boundary
- Greenspace
- Micromobility connections (including pedestrian and cycle)
- East-west landscape corridor to incorporate landscaping such as street trees and rhynes
- Existing trees/ woodland to be retained where possible
- Structural tree and woodland planting (indicative extents)
- Trees to be retained where possible subject to rail alignment and necessary associated infrastructure
- Gravity Park
- Green Edge to Woolavington
- Indicative location of greenspace
- Placemaking Node – important focal points, development should respond appropriately through landscape and built form.
- Green Edge to Woolavington Road – landscaped area adjoining highway to reflect campus feel.
- Landscape bund and planting
- Existing water bodies to be retained
- Indicative location of water attenuation
- Attenuation areas to be delievered as part of the link road
- Existing rhynes, IDB rhynes to be retained, other rhynes to be incorporated into site-wide drainage strategy
- Wellbeing and Arrival Zone Up to 50% of the zone will accommodate buildings, the remainder will beblue and green infrastructure, tree nursery, community uses, sports, leisure or associated infrastructure such as roads, footpaths and cycle routes.
- Rail corridor - Freight and Passenger, and associated infrastructure
- Passenger Station (indicative location)
- Development zone
- Development zone - Up to 50% of the zone will accommodate buildings, the remainder will be associated infrastructure such as rail, including mobile gantry cranes, roads and laydown space and/or green infrastructure.
- Overhead powerlines 400 kVA

REV.	DESCRIPTION	APP.	DATE
F	Changes to title block	RF	08.09.21
E	Woodland and water attenuation areas updated	RF	25.08.21
D	Train station logo relocated	RF	13.08.21
C	Key wording amended following CP comments	RF	04.06.21
B	Paths; graphic representation/ key; plan inset	RF	03.06.21
A	Format of key amended	RF	24.05.21
-	First Issue	RF	21.05.21

LDĀDESIGN

PROJECT TITLE
GRAVITY

DRAWING TITLE
PARAMETER PLAN
Strategic Landscape

ISSUED BY	Exeter	T: 01392 260430	
DATE	May 2021	DRAWN	KS/DA
SCALE@A1	1:5,000	CHECKED	RF
STATUS	LDO	APPROVED	FO

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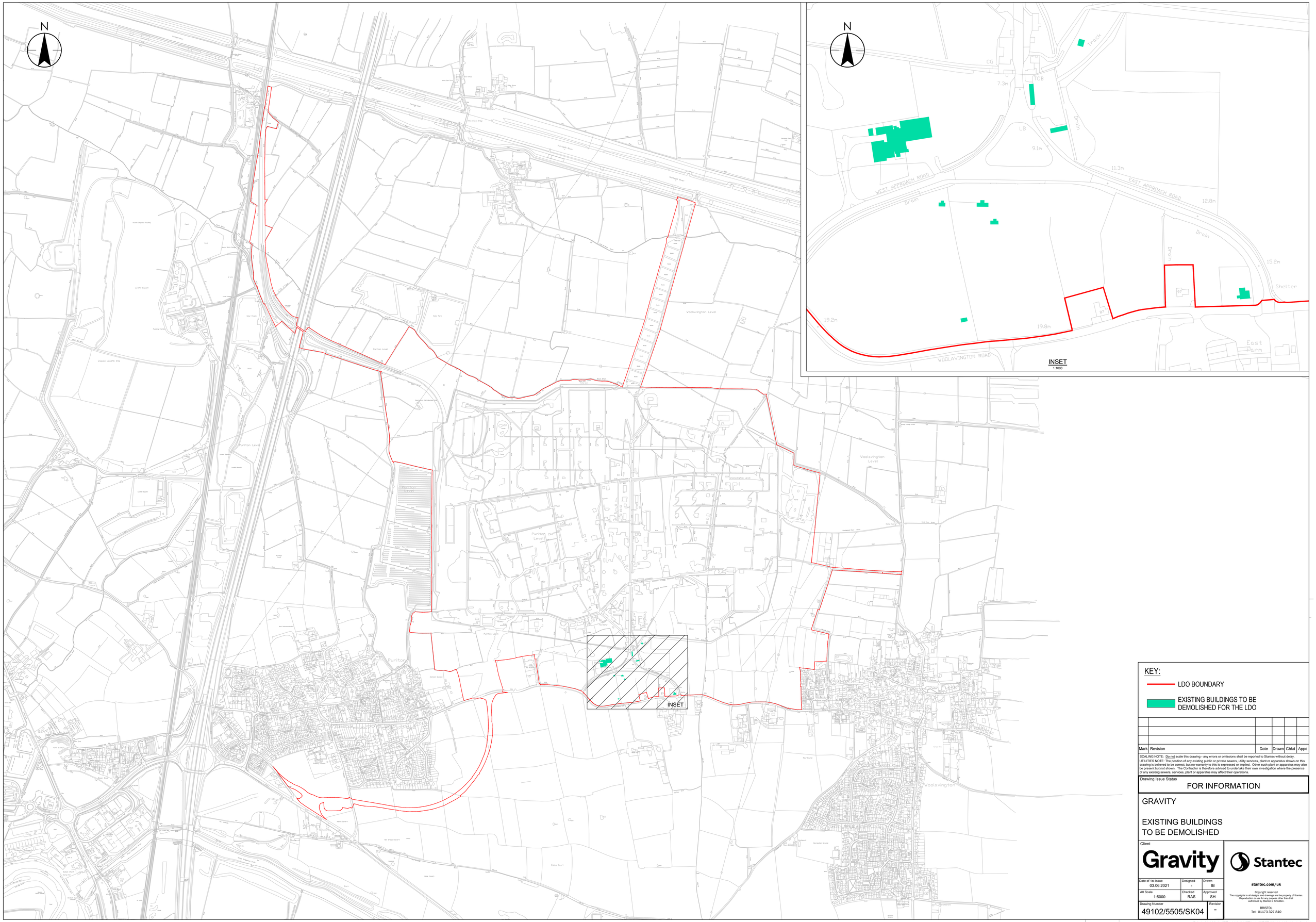

KEY:

LDO BOUNDARY

EXISTING BUILDINGS TO BE DEMOLISHED FOR THE LDO

Mark	Revision	Date	Drawn	Chkd	Appd

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Drawing Issue Status

FOR INFORMATION

GRAVITY

EXISTING BUILDINGS
TO BE DEMOLISHED

Client

Gravity

Stantec

Date of 1st Issue	Designed	Drawn
03.06.2021	-	IB
A0 Scale	**Checked**	**Approved**
1:5000	RAS	SH
Drawing Number		**Revision**
49102/5505/SK04		-

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BRISTOL
Tel: 01173 327 840

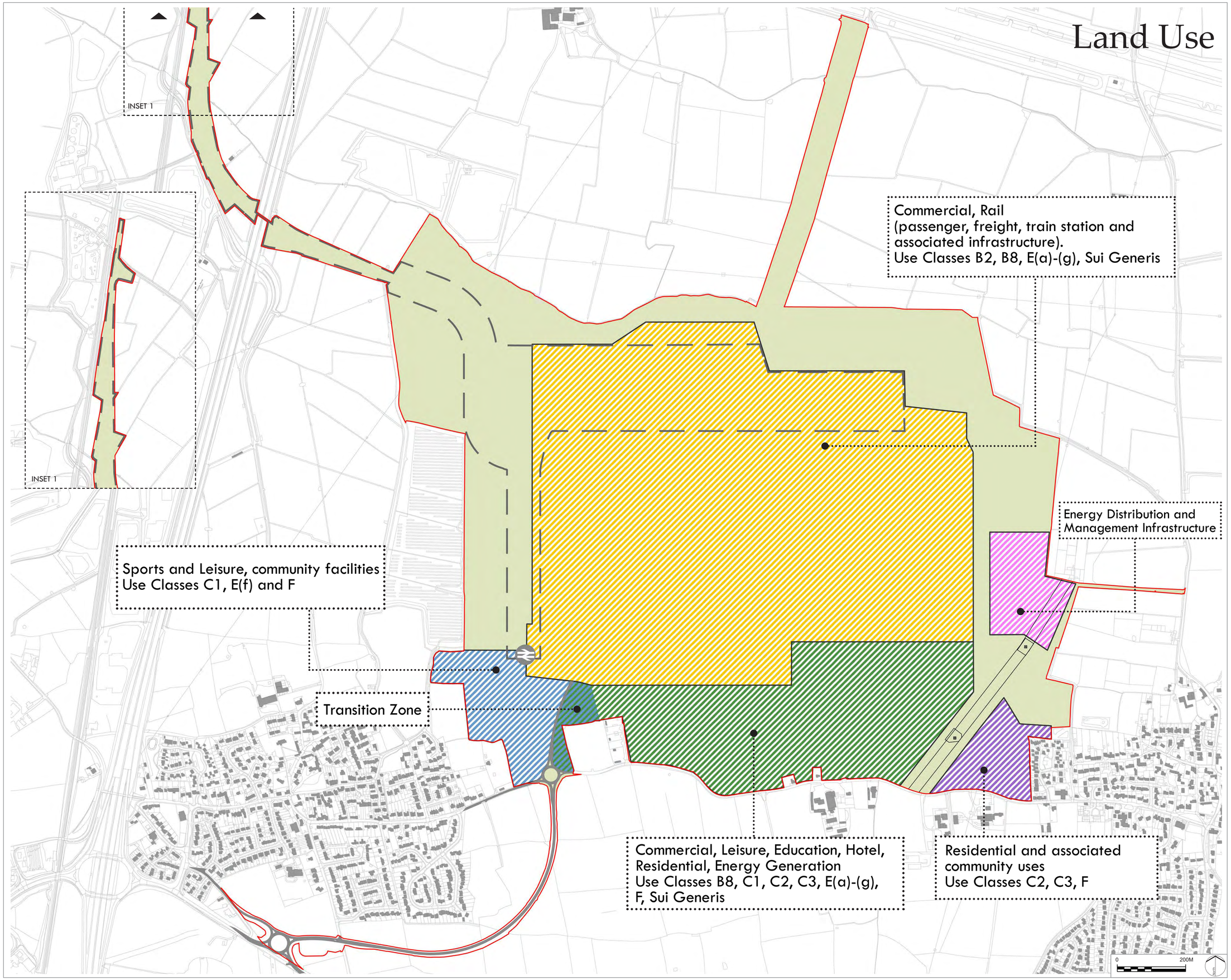
File name: stream_map

File location: \\gra.infor\projects\49102 gravity ltd\cad\inf 0303\sketches\49102-5505-sk04 - existing buildings to be demolished.dwg

Appendix D LDO Concept Masterplan

Z:\6599_Purton_Gravity Masterplan Development\Graphics\Plans_Images\Parameter Plans\6599_PP101_Land Uses.indd

Land Use



LEGEND

- LDO Boundary
- Commercial, Rail (passenger, freight, train station and associated infrastructure). Use Classes B2, B8, E(a)-(g), Sui Generis
- Energy Distribution and Management Infrastructure
- Residential and associated community uses Use Classes C2, C3, F
- Commercial, Leisure, Education, Hotel, Residential, Energy Generation Use Classes B8, C1, C2, C3, E(a)-(g), F, Sui Generis
- Sports and Leisure, community facilities Use Classes C1, E(f) and F
- Transition Zone
- Open space and biodiversity zones Including surface water attenuation features, watercourses, woodland, hedgerows and trees, utilities, occasional vehicular routes and rail line with associated infrastructure.
- Rail corridor - Freight and Passenger, and associated infrastructure
- Passenger Station (indicative location)

REV.	DESCRIPTION	APP.	DATE
L	Changes to title block	RF	08.09.21
K	Key updated	RF	25.08.21
J	Key updated	RF	16.08.21
I	Key updated	RF	16.08.21
H	Key updated	RF	16.08.21
G	Uses zones updated	RF	13.08.21
F	Key updated and train station logo relocated	RF	13.08.21
E	Key updated following comments from IH	RF	08.06.21
D	Key updated following comments from CP	RF	04.06.21
C	Rail corridor; plan inset	RF	03.06.21
B	Use classes	RF	24.05.21
A	Format of key amended	RF	24.05.21
-	First Issue	RF	21.05.21

LDĀDESIGN

PROJECT TITLE
GRAVITY

DRAWING TITLE
PARAMETER PLAN
Land Uses

ISSUED BY	Exeter	T: 01392 260430	
DATE	May 2021	DRAWN	KS/DA
SCALE@A1	1:5,000	CHECKED	RF
STATUS	LDO	APPROVED	FO

DWG. NO. 6599_PP201L

No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site.
Area measurements for indicative purposes only.

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Sources: Ordnance Survey

v2018.0

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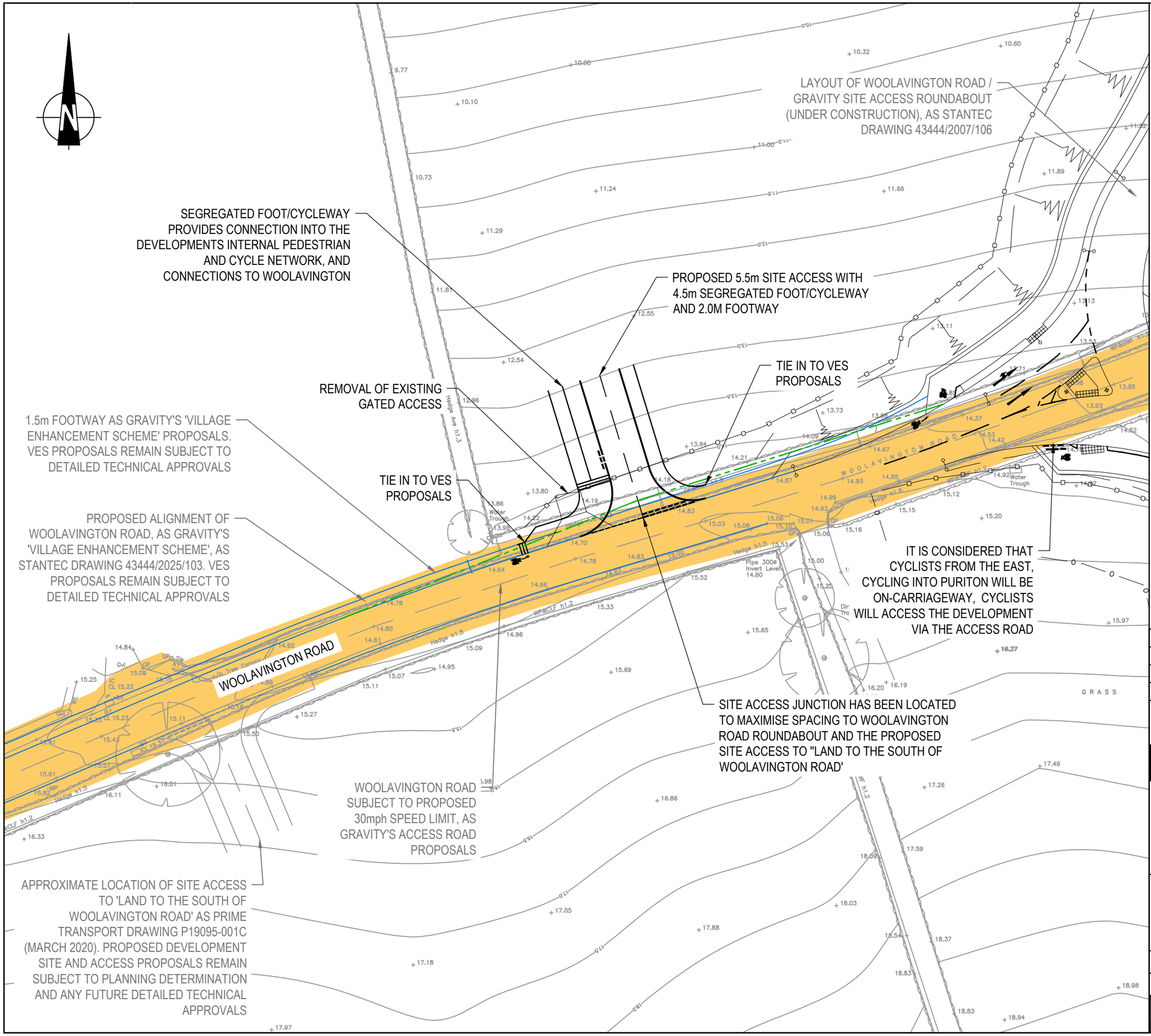
Appendix E Proposed New Secondary Site Access Drawings



NOTES:

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KEY:

HIGHWAY BOUNDARY INFORMATION RECEIVED FROM SOMERSET COUNTY COUNCIL ON 14.02.12 AND INTERPRETED BY STANTEC ONTO OS MAPPING.

2.4m x 43m VISIBILITY SPLAY IN ACCORDANCE WITH MANUAL FOR STREET FOR A 30MPH ROAD

Mark	Revision	Date	Drawn	Chkd	Appd

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Drawing Issue Status

FOR PLANNING

GRAVITY LDO

WESTERN SECONDARY SITE ACCESS JUNCTION ON TO WOOLAVINGTON ROAD

Client

Gravity

Stantec

Date of 1st Issue	Designed	Drawn
08.10.21	PC	PC
A3 Scale	**Checked**	**Approved**
1:500	NC	NC

Drawing Number	Revision
332310102/5505/101	-

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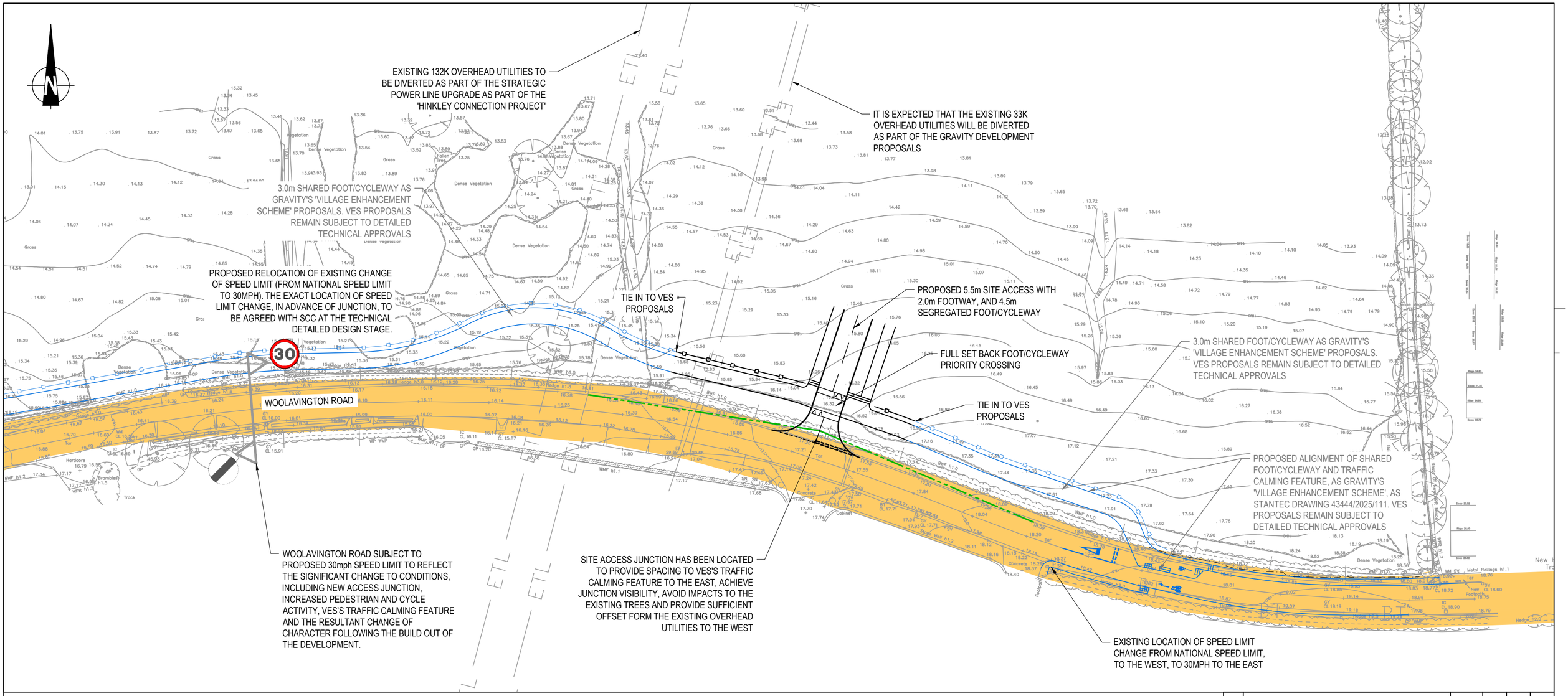

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KEY:

HIGHWAY BOUNDARY INFORMATION RECEIVED FROM SOMERSET COUNTY COUNCIL ON 14.02.12 AND INTERPRETED BY STANTEC ONTO OS MAPPING.

2.4M X 43M VISIBILITY SPLAY IN ACCORDANCE WITH MANUAL FOR STREET FOR A 30MPH ROAD

Mark	Revision	Date	Drawn	Chkd	Appd

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Drawing Issue Status

FOR PLANNING

GRAVITY LDO

EASTERN SECONDARY SITE ACCESS JUNCTION ON TO WOOLAVINGTON ROAD

Client

Gravity

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08.10.21	PC	PC
A2 Scale	Checked	Approved
1:500	NC	NC

Drawing Number	Revision
332310102/5505/102	-

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