

Capricorn Transport Planning



BLOOR HOMES

LAND WEST OF NORMANDY WAY, HINCKLEY

TRANSPORT ASSESSMENT

| Transportation Planning | Traffic Engineering | Sustainable Travel | Road Safety |

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Date	Revision	Description	Prepared	Checked	Approved
22.12.2022	-	First Issue (DRAFT)	SM	SM	SM
09.05.2023	A	Submission version	SM	SM	SM

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C21021/DR007	INTERNAL VEHICLE TRACKING: BUS INBOUND (4 OF 4)
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1.0 INTRODUCTION

1.1 Background

- 1.1.1 Capricorn Transport Planning Ltd (CTP) is appointed by Bloor Homes to advise on the highways and transport issues affecting proposed residential development on land to the west of Normandy Way, Hinckley, Leicestershire. **Figure 1.1** shows the location of the site in its wider context.

Figure 1.1: Site Location

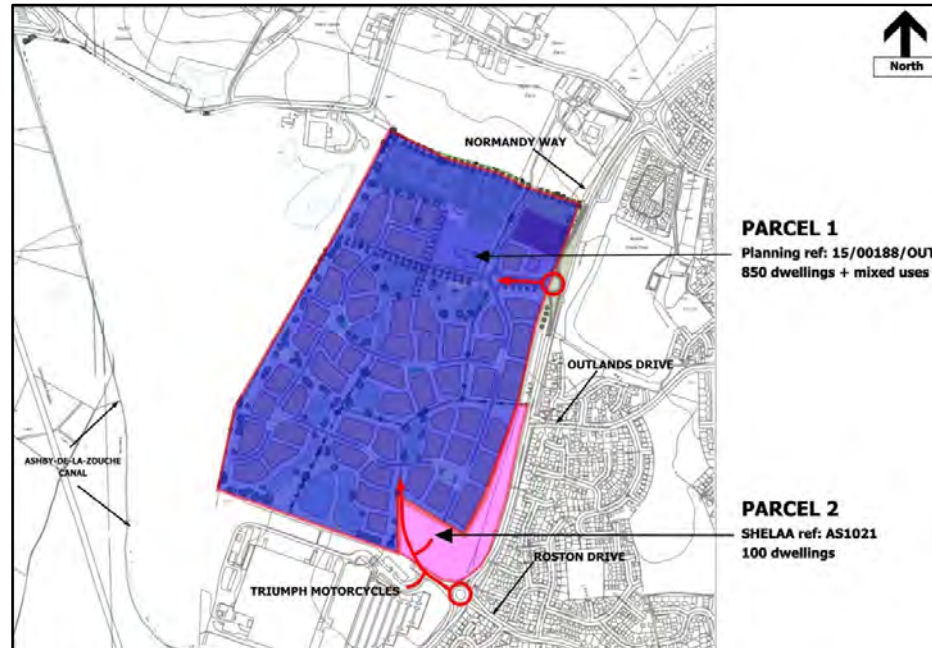


- 1.1.2 The land lies at the western edge of the existing Hinckley urban area, with highway frontages to the A47 Normandy Way, to the east, and the Hollycroft Grange development scheme to the north and west. The southern boundary adjoins the Triumph Motorcycles factory.
- 1.1.3 The land lies entirely within the Hinckley and Bosworth Borough Council (HBBC) local planning authority area. The three highway authorities who have responsibility for various parts of the adjacent highway network are as follows:
- Leicestershire County Council (LCC) is responsible for the local roads immediately adjacent to the site.
 - Warwickshire County Council (WCC) is responsible for local roads within the neighbouring Nuneaton and Bedworth local authority area to the south of the A5.
 - National Highways (NH) is responsible for the A5 and other parts of the Strategic

Road Network (SRN) in the vicinity of the site.

- 1.1.4 The area shown on Figure 1.1 comprises two land parcels. These are shown on **Figure 1.2**.

Figure 1.2: Constituent Land Parcels



- 1.1.5 Parcel 1 has planning consent for 850 dwellings and ancillary land uses, with access from a roundabout junction with Normandy Way. This development is now under construction as *Hollycroft Grange*.
- 1.1.6 Development of Parcel 2 would require a second access to Hollycroft Grange via the existing Normandy Way/Roston Drive roundabout as indicated on Figure 1.2.

1.2 Proposed Development

- 1.2.1 A Full Planning Application (FPA) is to be submitted to HBBC for additional development of 153 dwellings at Hollycroft Grange, utilising land within Parcel 2 and an adjacent section of Parcel 1, which is to be re-planned. The scheme would provide the new second access from Roston Drive.

1.3 Scope of Report

- 1.3.1 This Transport Assessment (TA) report has been prepared to support the FPA as described above. Its scope is summarised below:

- The planning status of the site and of the adjacent land parcels are confirmed;
- Relevant national and local planning and transport policies are reviewed;
- The site and surrounding transport network are described;
- Opportunities for access to the site by sustainable travel modes are considered;
- The proposed development scheme is described;
- The development access scheme is presented;
- The volume and distribution of development-generated trips are estimated;
- Assessment year and traffic growth assumptions are identified;
- Committed development traffic flows and effects are identified;
- Forecast assessment year traffic flows are presented;
- Highway capacity assessments are presented and discussed;
- Conclusions are drawn.

1.3.2 The TA presents a conventional assessment of highway capacity and impact, based on a series of traffic surveys and a static assignment of development traffic using a trip distribution model based on National Census data.

1.3.3 It is considered that the conventional assessments presented in this TA are sufficient to demonstrate the acceptability of the FPA development and its proposed access arrangements.

1.3.4 The TA has been prepared following extensive discussions with the highway authorities, which were informed by a TA Scoping Report (Rev A dated 04/03/22). Relevant correspondence on the scope of the TA is provided in **Appendix A**.

1.3.5 This report demonstrates that:

- The proposed development is compliant with the relevant national and local transport planning policies;
- Satisfactorily vehicular access to the site can be achieved;
- The proposed development is in an accessible location and within walking or

cycling distance of local facilities and the public transport network;

- The impact of the development on the highway network adjacent to the site would not be significant.

1.3.6 In summary, it is considered that the proposed FPA development could be accommodated satisfactorily on the highway network and would be accessible by sustainable travel modes. It is therefore concluded that there are no significant transport-related issues that should prevent the granting of planning consent for the FPA scheme and its proposed access arrangements.

2.0 POLICY AND PLANNING BACKGROUND

2.1 Overview

2.1.1 It is considered that the most significant transport-related policies relevant to the proposal are contained within the following documents:

- The National Planning Policy Framework (NPPF);
- The Hinckley and Bosworth Local Plan;
- The Leicestershire Local Transport Plan.

2.1.2 The relevant transport-related policies from each of the above documents are reviewed below.

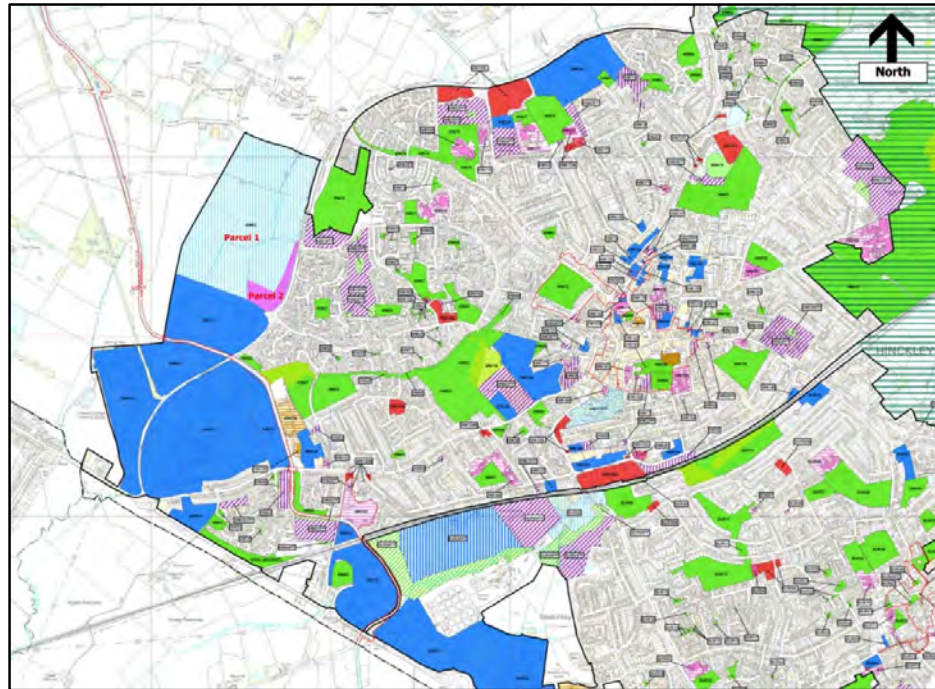
2.1.3 The following technical guidance documents have also been consulted during the preparation of this TA:

- *Planning Practice Guidance on Travel Plans, Transport Assessments and Statements* (2014);
- *Manual for Streets* (DfT, 2007) and *Manual for Streets 2* (CIHT, 2010);
- *New Streets Design Guide* (NCC);
- Relevant *Local Transport Notes* (LTNs);
- The DfT's *Traffic Signs Manual*;
- The DfT's *Design Manual for Roads and Bridges* (DMRB).

2.2 Planning Status

2.2.1 An extract from the *Site Allocations and Development Management Policies DPD* showing the three land parcels relative to the Local Plan policy areas is presented as **Figure 2.1**.

Figure 2.1: Site Boundaries and Local Plan Policy Areas



- 2.2.2 Parcels 1 and 2 both form part of the HIN02 Local Plan allocation of 850 dwellings. Parcel 1 has outline planning consent for a development of 850 dwellings, retail units, a primary school, sports and community facilities and open space (*HBBC Planning Ref:15/00188/OUT*). It is also referenced in the *Site Allocations and Development Management Policies DPD* as Site Ref: **HIN02**, which is allocated for development by **Policy SA2**. Parcel 1 is currently under construction as *Hollycroft Grange*.
- 2.2.3 **Parcel 2** is part of the existing **HIN02** site as allocated in the adopted Local Plan, being safe guarded for development by **Policy SA1** of the *Site Allocations and Development Management Policies DPD*. This smaller parcel of is also identified in the Strategic Housing and Economic Land Availability Assessment (SHEELA) as *Site Ref: AS1021* with a capacity of 100 dwellings.
- 2.2.4 The approved access to all phases within Parcel 1 is the recently constructed roundabout junction of Normandy Way with Greenfinch Road, located between Outlands Drive and Wykin Road.
- 2.2.5 Parcel 2 would be accessed from Normandy Way via a modified roundabout junction with Roston Drive, as described in this TA. The same roundabout would continue to serve Triumph Motorcycles (via a spur road) and would also be connected to the Greenfinch Road roundabout access by an internal Spine Road through Parcel 1.

2.3 The National Planning Policy Framework (NPPF)

- 2.3.1 The revised NPPF was published in July 2021 and sets out the Government's policies for helping to deliver sustainable development through the planning system. Local authorities are required to take these policies into account when formulating local development plans and they are also a material consideration when determining planning applications.
- 2.3.2 To ensure that sustainable development is pursued in a positive way, the NPPF's over-arching policy theme is that there is a presumption in favour of sustainable development. Local authorities are required to approve planning applications without delay where they accord with an up-to-date development plan.
- 2.3.3 Where there is no current development plan policy in place, or the policies that are most important for determining the application are out-of-date, applications should be approved unless: the NPPF policies that protect areas or assets of particular importance provide a clear reason for refusal, or; that any adverse impacts of doing so would "*significantly and demonstrably outweigh the benefits*" when assessed against the policies in the NPPF taken as a whole.
- 2.3.4 The NPPF requires consideration of transport issues at the earliest stages of plan-making and development planning. The aims should be to ensure that potential impacts on transport networks can be addressed; and that opportunities arising from transport infrastructure, improved transport technology and changing travel patterns are realised. Opportunities to promote walking, cycling and public transport use should be identified. Streets, parking and other transport provision should be integral to scheme design and should contribute to making high quality places.
- 2.3.5 The NPPF states that the planning system should seek to guide significant developments to locations that are or can be made sustainable, by limiting the need to travel and providing a choice of travel modes. It recognises, however, that opportunities to maximise the use of sustainable travel options will vary between urban and rural locations.
- 2.3.6 NPPF Paragraph 110 states that decisions on planning applications or proposed site allocations should then take account of whether:
- *appropriate opportunities to promote sustainable transport modes can be – or have been - taken up, given the type of development and its location;*
 - *safe and suitable access to the site can be achieved for all users;*

- *the design of streets, parking areas, other transport elements and the content of associated standards reflects current national guidance, including the National Design Guide and the National Model Design Code; 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.*

2.3.7 NPPF Paragraph 111 states that:

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.

2.3.8 NPPF Paragraph 112 states that within this context, developments should:

a) give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second – so far as possible – to facilitating access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use;

b) address the needs of people with disabilities and reduced mobility in relation to all modes of transport;

c) create places that are safe, secure and attractive – which minimise the scope for conflicts between pedestrians, cyclists and vehicles, avoid unnecessary street clutter, and respond to local character and design standards;

d) allow for the efficient delivery of goods, and access by service and emergency vehicles; and

e) be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations.

2.3.9 NPPF Paragraph 113 states that developments should be supported by a Transport Assessment or Statement and, where they would generate significant movement, a Travel Plan.

2.3.10 This TA has been prepared in accordance with the above policy requirements. The proposed site access arrangements take account of the NPPF's objectives by satisfactorily connecting the development to the adjacent highway and sustainable

travel networks. Details of the proposed access arrangements are provided in Section 5 of this report.

2.4 Adopted Local Plan

2.4.1 The Hinckley and Bosworth Local Plan covers the period 2006 to 2026 and comprises the following main documents:

- The Core Strategy DPD (adopted December 2009);
- The Site Allocations and Development Management Policies DPD (adopted July 2016).

2.4.2 The **Core Strategy** provides the over-arching long- term vision and spatial strategy for Hinckley and Bosworth. It indicates that the majority of new development will be accommodated in and around the Hinckley sub-regional centre through sustainable amendments to the settlement boundary. Core Strategy policies relevant to this TA are reviewed below.

2.4.3 **Spatial Objective 6: Infrastructure Provision.** *To ensure that development contributes to the necessary infrastructure required by new development, through provision of new, or where appropriate, enhancement of existing infrastructure (for example through appropriate developer contributions).*

2.4.4 **Spatial Objective 7: Healthier Active Communities.** *To develop healthier and stronger communities by improving access to, and the provision of, community, sports and cultural facilities, green infrastructure and walking and cycling routes integrated with local public transport. Whilst there are localised areas where additional community, sports and cultural facilities are required, overall, provision is generally sufficient across the borough, but the quality of these facilities needs to be improved.*

2.4.5 **Spatial Objective 12: Climate Change and Resource Efficiency.** *To minimise the impacts of climate change by promoting the prudent use of resources through sustainable patterns of development, investment in green infrastructure, minimising the use of resources and energy, increasing reuse and recycling of natural resources, increasing the use of renewable energy technologies and minimising pollution, including greenhouse gas emissions.*

2.4.6 **Spatial Objective 13: Transportation and Need to Travel.** *To reduce the high reliance on car travel in the borough and to increase the opportunities for other forms*

of transport by focusing the majority of development in the Hinckley urban area where there is a range of transport options available and through securing improvement to public transport infrastructure and facilities that promote walking and cycling and through the use of travel plans.

2.4.7 **Policy 4: Development in Hinckley.** This policy supports Hinckley's role as a sub-regional centre by providing a balanced mix of housing and employment opportunities. It requires the provision of a transport interchange at Hinckley railway station; a new bus station; safe, high quality cycle routes; and other transport improvements in accordance with Policy 5 (see below).

2.4.8 **Policy 5: Transport Infrastructure in the Sub-regional Centre.** This policy identifies the transport interventions that are required to support major proposed Sustainable Urban Extensions and other housing growth. Policy 5 identifies the following schemes in the vicinity of, or relevant to, the development site:

- Improvements at the A5/A47 "The Long Shoot" junction;
- Links to existing urban area for buses (particularly the railway station), pedestrians, cyclists and local traffic;
- Cycle routes to be implemented are identified in *HBBC's Hinckley Cycle Network Plan* (priority will be given to those strategic routes that connect the Hinckley, Burbage, Barwell and Earl Shilton urban areas);
- Improvements to the A47 Hinckley Northern Perimeter Road (HNPR), the Earl Shilton bypass and the A447 to facilitate public transport movement;
- New public transport links from developments to Barwell, Earl Shilton, Hinckley town centre and the HNPR employment areas (including those adjacent to Normandy Way);
- Improvements to the provision and management of car parking and public transport to support the increased use of Hinckley town centre.

2.4.9 Policy 5 states that:

Developers will be required to contribute towards the implementation of these initiatives through developer contributions where they meet the tests set out in national guidance. New development that would prejudice their implementation will not be permitted.

- 2.4.10 The **Site Allocations & Development Management Policies DPD** contains additional policies that are relevant to this TA, as summarised below.
- 2.4.11 **Policy SA2** allocates the land west of Normandy Way for: a residential development of 850 dwellings; a local shop or neighbourhood centre; a primary school; safe pedestrian access across Normandy Way; open space; and a strategy to reduce the impact of development-related traffic on Wykin Lane and Wykin village.
- 2.4.12 **Policy DM1: Presumption in Favour of Sustainable Development.** This policy states that developments which accord with the Local Plan policies will be approved without delay unless material considerations indicate otherwise, and that where no relevant or current policy can be found, planning applications will be approved unless:
- Any adverse impacts of granting permission would significantly and demonstrably outweigh the benefits, when assessed against the policies in the National Planning Policy Framework taken as a whole; or
 - Specific policies in that Framework indicate that development should be restricted.
- 2.4.13 **Policy DM3: Infrastructure and Delivery.** This policy states that:
- Where development will create a need to provide additional or improved infrastructure, amenities or facilities, developers will be expected to make such provision directly or indirectly through the appropriate funding mechanism.*
- 2.4.14 However, the policy also makes provision for contributions to be lower than would normally be required where this would affect the viability of a development.
- 2.4.15 **Policy DM10: Development and Design.** This policy has various requirements including provision for electric or low-emission vehicle charging points where parking is to be provided.
- 2.4.16 **Policy DM17: Highways and Transportation.** This policy states that:
- Development proposals will be supported where they:*
- a) Seek to make the best use of existing public transport services and, where appropriate, provide opportunities for improving and sustaining the viability of those services;*
-

- b) Seek to ensure that there is convenient and safe access for walking and cycling to services and facilities;*
- c) Demonstrate that there is not a significant adverse impact upon highway safety; and in the case of development that generates significant movement;*
- d) That the development is located where the need to travel will be minimised and the use of sustainable transport modes can be maximised;*
- e) Where it can be demonstrated that the residual cumulative impacts of development on the transport network are not severe.*

Where appropriate, improvements will be required to be undertaken to the highways and transportation network to limit any significant impacts arising from the development (taking into account cost effectiveness).

All proposals for new development and changes of use should reflect the highway design standards that are set out in the most up to date guidance adopted by the relevant highways authority.

2.4.17 Policy DM18: Vehicle Parking Standards. This policy states that:

All proposals for new development will be required to provide an appropriate level of parking provision justified by an assessment of the site location, type of housing, other modes of transport available (e.g. public transport and cycle provision) and appropriate design. Any development will be expected to provide disabled parking provision.

2.5 Emerging Local Plan

2.5.1 HBBC is currently working on a new Local Plan, which will provide policies and land allocations to cover the period 2020 to 2039. A draft version of the new Local Plan has been subject to public consultation (Regulation 18) and was expected to be submitted for examination in 2022. However, on 13 December 2022, the Full Council approved a new timetable for the production of the Local Plan which extended the plan period to 2041 and scheduled a consultation exercise on the submission draft Local Plan (Regulation 19) in May to June 2024.

2.5.2 The following draft new Local Plan policies are potentially relevant to the proposed development, although currently these can be given only limited weight.

2.5.3 **Policy PMD01: High Quality Design.** This draft policy states that development will be supported where a range of requirements is met, including that:

"All elements of the development are designed with climate change in mind, maximising opportunities for active travel and sustainable transport methods to help reduce car dependency, renewable and low/net-zero carbon energy technologies, including electric vehicle charging points where feasible, use of sustainable and low-carbon materials where feasible, building in flexibility to respond to change, and mechanisms for reducing energy consumption within buildings"

and that it;

"Ensures a sufficient level of well-integrated and imaginative solutions for vehicle parking and recycling and waste management."

2.5.4 **Policy PMD02: Active Design and Travel.** This draft policy seeks to maximise active travel and has the following requirements:

Development proposals for new residential development of 10 or more dwellings should demonstrate how they can help to support healthy lifestyles and as far as is relevant to the proposal following the Active Design Principles. Where a Design and Access Statement is required to support a development proposal it should explain how the development incorporates and achieves the Active Design Principles.

Development proposals must take account of existing access networks within and around the site. Applicants should demonstrate how the design and layout of development prioritises active travel modes and recreation routes and maintains and enhances the quality and connectivity of the active travel network. Active travel

routes should be integrated with green infrastructure; where integration is not proposed, applicants must provide evidence as to why it is not possible. Proposals must demonstrate that the needs of all users have been provided for throughout the year.

2.5.5 **Policy HT01: Highways and Transportation.** This policy states that:

2.5.6 Development proposals will be supported where the applicant has demonstrated:

The best use of existing public transport services and, where appropriate, opportunities for improving and sustaining the viability of those services has been sought; and

That there is convenient and safe access for walking and cycling to services and facilities; and

That new sustainable transport infrastructure is well designed, integrated with the Green Infrastructure and contributes towards making high quality places; and

That there is not a significant adverse impact upon highway safety; and in the case of development that generates significant movements:

i) The development is located where the need to travel will be minimised and the use of sustainable transport modes can be maximised; and

ii) The residual cumulative impacts of development on the transport network are not significant.

All proposals for new development and changes of use should conform to the highway design standards that are set out in the most up to date guidance adopted by the relevant highways authority, and, where appropriate, be supported by a transport assessment and travel plan.

Where the impacts of the development taken cumulatively with other schemes would have a significantly adverse effect on the transport network, the Council will seek measures including, where necessary, a financial contribution fairly and reasonably related to the development to mitigate the impact of the scheme in accordance with Policy INF01.

2.5.7 Notwithstanding the draft status of this policy, it is aligned to NPPF requirements and the TA has been prepared with these requirements in mind.

- 2.5.8 Policy HT02: Parking Standards. This draft policy has the following requirements of potential relevance to the proposed development:

All proposals for new development will be required to provide an appropriate level of parking provision in conformity with the prevailing highways authority design guidance, justified by an assessment of the site location, type of housing, other modes of transport available (e.g. public transport and cycle provision) and appropriate design. Any development will be expected to provide disabled parking provision.

On site cycle parking should be provided however where it is demonstrated that the minimum on-site provision to meet the standards set out in the highways authority design guidance is not feasible, a financial contribution will be required towards public facilities.

- 2.5.9 **Policy HT03: Charging Infrastructure.** This draft policy sets out the requirements for Electric Vehicle (EV) charging points as follows:

Proposals for new major residential development will be required to provide the following electric vehicle charging infrastructure:

- *One electric charging point for every new dwelling with parking provision within its curtilage.*
- *One charging point for every 10 parking spaces for residential development with unallocated communal off street parking, and passive charging provision to be provided for all remaining spaces.*

- 2.5.10 **Policy HT04: A5 Improvement Corridor.** This draft policy states that:

Where the impacts of a development taken cumulatively with other schemes would have a significantly adverse effect on the A5 and junctions connecting with the A5, the Council will seek financial contributions that are fairly and reasonably related to the development, to contribute towards the A5 as identified in the Council's latest Infrastructure Delivery Schedule, A5 Strategy and Highways England Capital Programme.

- 2.5.11 Discussions with NH, LCC and WCC on the potential impacts of further development on the A5 are ongoing and taken into consideration within this TA.

- 2.5.12 **Policy INF01: Infrastructure and Delivery.** This draft Policy sets out the requirements for development to provide the infrastructure and measures (including highway improvements) to accommodate it and mitigate its impacts, either directly or through developer contributions.

2.6 Local Transport Plan

- 2.6.1 The third Leicestershire Local Transport Plan, 2011-2026 (LTP3) was published in 2011 and sets out LCC's transport proposals to support Leicestershire as a prosperous, safe and attractive county.

- 2.6.2 LTP3 comprises a long-term transport strategy with a vision for transport to 2026, supported by a rolling three-year Implementation Plan. The long-term vision for the transport system over the course of LTP3 is for:

Leicestershire to be recognised as a place that has, with the help of its residents and businesses, a first-class transport system that enables economic and social travel in ways that improve people's health, safety and prosperity, as well as their environment and their quality of life.

- 2.6.3 To achieve this vision, a strategic framework was developed that includes a set of goals and activities. Goals have been set to guide the efforts of LTP3 and are summarised below:

- **Goal 1:** *A transport system that supports a prosperous economy and provides successfully for population growth.*
- **Goal 2:** *An efficient, resilient and sustainable transport system that is well managed and maintained.*
- **Goal 3:** *A transport system that helps to reduce the carbon footprint of Leicestershire.*
- **Goal 4:** *An accessible and integrated transport system that helps promote equality of opportunity for all our residents.*
- **Goal 5:** *A transport system that improves the safety, health and security of our residents.*
- **Goal 6:** *A transport system that helps to improve the quality of life for our residents and makes Leicestershire a more attractive place to live, work and*

visit.

2.6.4 The TA shows how the proposed development would support the following LTP3 goals:

- Encouraging safe, active and sustainable travel (Goals 3, 4 and 5).
- Connectivity with and access to the transport system (Goal 4);
- Maximising road safety (Goal 5).
- Managing impacts on the transport system and quality of life (Goal 6).

2.6.5 LTP3 identifies Hinckley as a key area for investment with a view to stimulating economic growth whilst minimising congestion and reducing carbon emissions. The *Hinckley Area Project* is identified as a co-ordinated programme of investment in walking and cycling improvements, bus stop improvements and traffic management measures. The project area includes the full extent of the Hinckley urban area, including the application site, and also extends to Earl Shilton and Barwell.

3.0 EXISTING CONDITIONS

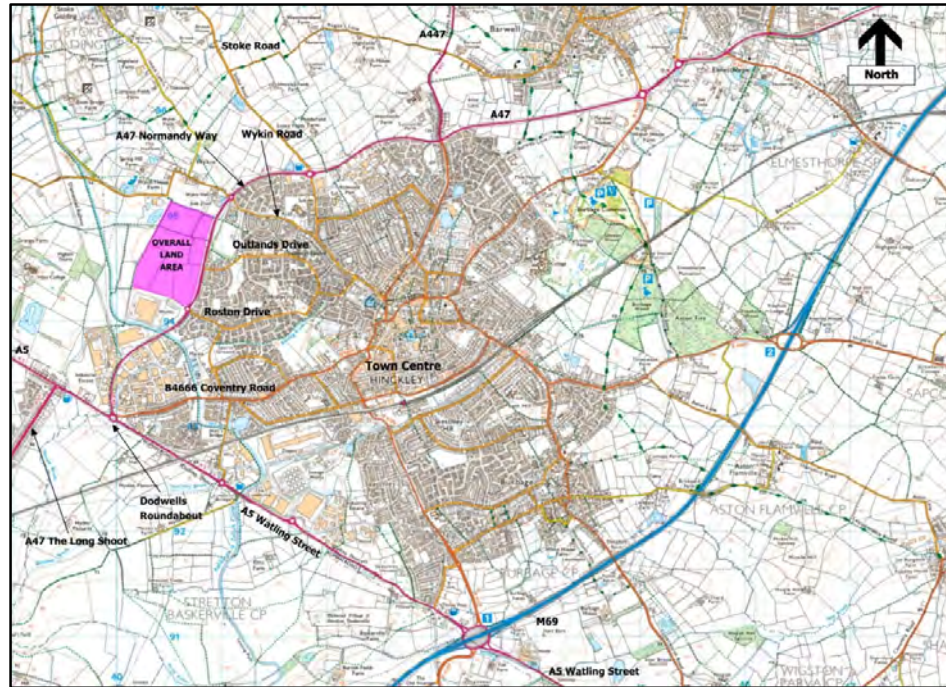
3.1 Location

- 3.1.1 The site would form an extension of the Hollycroft Grange development, which lies within approximately 2.2km of Hinckley town centre.
- 3.1.2 Nuneaton town centre lies approximately 5km to the south-west of the site. The development lies close to Hinckley's main employment areas, adjacent to the A5 corridor. The Dodwell's and Harrowbrook industrial estates lie within approximately 1km and the Sketchley employment area lies approximately 2.6km to the south-east.
- 3.1.3 Although the site is entirely within the HBBC local authority area, the Leicestershire/Warwickshire county boundary lies along the A5 and the highway network to the south of this route is therefore the responsibility of WCC.
- 3.1.4 The site also lies close to the A5 and the M69 motorway, both of which are part of the Strategic Road Network (SRN) and therefore the responsibility of NH. The nearest access to the SRN is at the A5/A47 Dodwell's Roundabout. The nearest access to the motorway network is via the A5 at M69 Junction 1, with alternative points of access available at M42 Junction 10 to the west and M1 Junction 18 further to the south-east.

3.2 Local Highway Network

- 3.2.1 The local highway network in the vicinity of the site is shown on **Figure 3.1**.

Figure 3.1: Local Highway Network



3.2.2 The main highway corridors in the vicinity of the site are as follows:

- A47 Normandy Way is part of the Hinckley Northern Perimeter Road (HNPR) that links the A5 with the Earl Shilton Bypass and provides an orbital route on the western and northern sides of Hinckley. It connects Hinckley with the A5 and Leicester, providing access to major developments along its length.
- A5 Watling Street skirts Hinckley to the south-west and connects it with Nuneaton (via The Long Shoot), Tamworth and the M1, M42 and M69 motorways.
- A47 The Long Shoot links the A5 with Nuneaton, Bedworth and the M6 motorway (via the A444).
- B4666 Coventry Road links the A5 and A47 at Dodwell's Roundabout with Hinckley town centre.
- Outlands Drive and Roston Drive are major residential distributor roads to the east of Normandy Way that provide connections with central Hinckley.
- Wykin Road lies to the north of the site and also provides a radial route to central Hinckley.
- Greenfinch Road is a short dual carriageway road that links the Hollycroft Grange

internal Spine Road (Lapwing Drive) with Normandy Way.

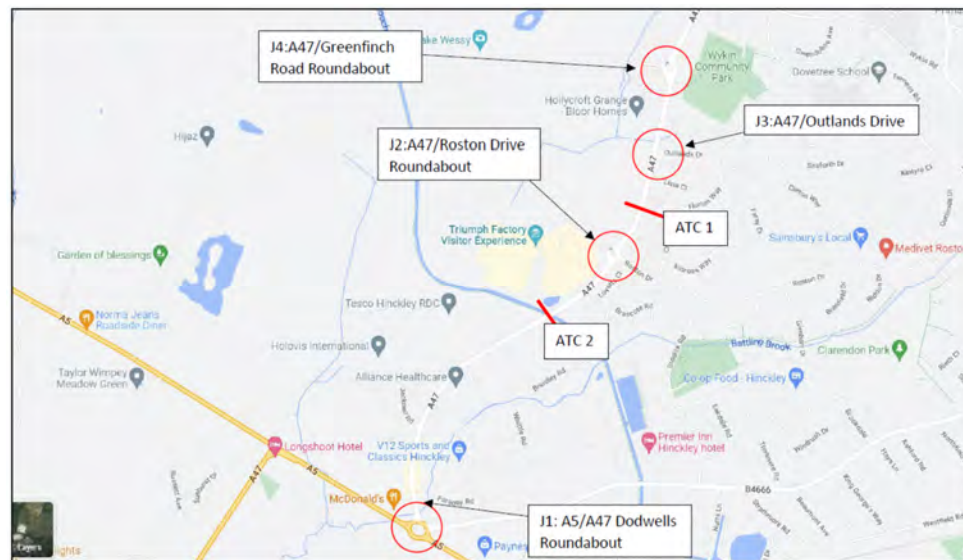
- 3.2.3 **Normandy Way** is a 10.0m wide single carriageway road, with limited frontage development. However, it has street lighting and an existing speed limit of 40mph to the north and south of the Greenfinch Road roundabout.
- 3.2.4 A new foot/cycleway and signal-controlled crossing have been installed on the south side of the Normandy Way/Greenfinch Road site access roundabout. An off-carriageway segregated foot-cycleway on the eastern side of the Normandy Way connects Greenfinch Road with Roston Drive and to similar facilities alongside Outlands Drive. The footway and carriageway facilities each have a width of 1.5m. A shared-use facility then connects Roston Drive with the Dodwell's industrial estate and the A5 corridor beyond. There is currently no footway or cycleway along the western side of Normandy Way between Greenfinch Road and Roston Drive, although crossings to the facility on the eastern side have been provided as part of the agreed Hollycroft Grange off-site highway works.
- 3.2.5 The **A5** to the south of Hinckley is a single-carriageway road with a footway along most of its northern side. The route has infrequent side road junctions and some street lighting. It is subject to a speed limit of 40mph, which increases to 50mph just to the east of the A47 Dodwell's Roundabout.
- 3.2.6 **The Long Shoot** is a single-carriageway road with footways to each side and extensively developed frontages. It has street lighting and is subject to a speed limit of 40mph. The junction with the A5 is a 3-arm traffic signal junction.
- 3.2.7 **Coventry Road** is a single carriageway urban distributor road, with developed frontages and footways on each side. It has street lighting and is subject to a 30mph speed limit.
- 3.2.8 **Outlands Drive, Roston Drive** and **Wykin Road** are residential distributor roads with street lighting and developed frontages. All have footways on both sides and are subject to a 30mph speed limit. Outlands Drive provides a foot/cycleway on both sides of the carriageway between Normandy Way and Clifton Way.
- 3.2.9 There are no waiting restrictions in force along Normandy Way, Roston Drive or Outlands Drive in the vicinity of the site. However, during site visits, no significant on-street parking has been observed.

- 3.2.10 LCC's on-line mapping service indicates that no Public Rights of Way (PRoW) pass through or adjacent to the FPA site.

3.3 Traffic Data

- 3.3.1 A series of traffic surveys was undertaken during June 2022. The locations and types of survey are shown on **Figure 3.2**.

Figure 3.2: Traffic Survey Locations



- 3.3.2 Automatic Traffic Count (ATC) surveys were undertaken on Normandy Way at each side of the Roston Drive roundabout (J2). The ATCs recorded passing traffic flows and speeds continuously over a 7-day period from Tuesday 21 to Monday 27 June 2022. ATC data has been used to identify existing traffic flows and speeds on the approaches to the Roston Drive roundabout, from which the development site access is to be provided.
- 3.3.3 Manual Classified Count (MCC) surveys were undertaken at the 4 study area junctions shown on Figure 3.2. These surveys were undertaken on Tuesday 21 June 2022. The MCC surveys recorded traffic movements during the weekday peak periods 07:30-09:30 and 16:30-18:30. All turning movements and the number of vehicles queued on each approach were recorded at 15-minute intervals throughout these periods.
- 3.3.4 Traffic surveys were undertaken by PCC Traffic Information Consultancy, who advised that the surveys were completed successfully and there were no reported incidents around the junctions of interest that would have influenced the vehicle flows or caused abnormal queuing. However, it was noted that the Triumph Motorcycles

Visitor Centre on the west side of the Roston Drive roundabout was closed during the survey period.

3.3.5 The MCC survey at J2 (Roston Drive roundabout) was therefore repeated on Wednesday 26 October 2022. The October survey did not show significantly different traffic flows at the junction compared with those recorded in June 2022. For consistency with the other junctions, the June 2022 traffic data has therefore been used in the capacity assessments that follow.

3.3.6 The October survey at J2 also recorded the number of pedestrians crossing each arm of the junction at 15-minute intervals throughout the survey period. These are discussed below.

3.3.1 All surveys were recorded in neutral months outside of public holiday periods.

3.3.2 The raw traffic survey data is provided in **Appendix B**.

3.4 Traffic Speeds

3.4.1 The vehicle speeds recorded by the ATC surveys are over the entire period are summarised in **Table 3.1** below.

Table 3.1: Speed Survey Results (w/c 21 June 2022)

SITE REF	ROAD NAME	DIRECTION	RECORDED SPEEDS (7-day average, mph)	
			AVERAGE	85TH %ILE
ATC1	NORMANDY WAY NORTH OF ROSTON DRIVE (grid ref: 52.54571, -1.39974)	SOUTHBOUND	37	43
		NORTHBOUND	33	40
ATC2	NORMANDY WAY SOUTH OF ROSTON DRIVE (grid ref: 52.54093, -1.40625)	SOUTHBOUND	26	34
		NORTHBOUND	27	34

3.4.2 The results show that speeds on the south side of the roundabout are lower than on the north side. However, average speeds north of Roston Drive remain below 40mph and 85th percentile speeds are around 40mph. The 85th recorded percentile speeds only exceeded the current 40mph speed limit on the southbound approach to Roston Drive, and by a modest margin.

3.5 Traffic Flows

3.5.1 The peak hour traffic flows recorded by the ATCs are summarised in **Table 3.2**.

Table 3.2: Average Weekday Peak Hour Flows (w/c 21 June 2022)

SITE REF	ROAD NAME	SOUTHBOUND (vehicles)		NORTHBOUND (vehicles)	
		08:00-09:00	17:00-18:00	08:00-09:00	17:00-18:00
ATC1	NORMANDY WAY NORTH OF ROSTON DRIVE (grid ref: 52.54571, -1.39974)	745	570	626	878
ATC2	NORMANDY WAY SOUTH OF ROSTON DRIVE (grid ref: 52.54093, -1.40625)	602	514	508	688

- 3.5.2 The results indicate peak hour flows of some 800 to 900 vehicles per hour in the peak directions of travel. The highest two-way peak hour flows are approximately 1,400 vehicles during the AM peak hour and 1,500 vehicles during the PM peak hour.
- 3.5.3 Two-way traffic flows over an average weekday (5-day week) and average day (7-day week) are as summarised in **Table 3.3**.

Table 3.3: Average Daily Flows (w/c 04 October 2022)

SITE REF	ROAD NAME	DIRECTION	24-HOUR DAILY FLOWS (vehicles)	
			AVERAGE WEEKDAY	AVERAGE DAY
ATC1	NORMANDY WAY NORTH OF ROSTON DRIVE (grid ref: 52.54571, -1.39974)	SOUTHBOUND	8883	8227
		NORTHBOUND	8934	8228
ATC2	NORMANDY WAY SOUTH OF ROSTON DRIVE (grid ref: 52.54093, -1.40625)	SOUTHBOUND	8048	7545
		NORTHBOUND	7938	7421

- 3.5.4 The average two-way traffic flows on Normandy Way north of Roston Drive were therefore approximately 16,500 vehicles per day. Average two-way traffic flows south of Roston Drive were slightly lower at approximately 15,000 vehicles per day.

3.6 Pedestrian and Cycle Movements

- 3.6.1 The MCC survey undertaken on Wednesday 26 October 2022 at the Normandy Way/Roston Drive included a survey of pedestrians and cycles crossing each arm of the junction. The survey periods were 07:30-09:30 and 16:30-18:30. A summary of the results is presented in **Table 3.4**.

Table 3.4: A47/Roston Drive Roundabout – Pedestrian/Cycle Crossings

Period	Two-way crossing movements by arm			
	A47 (N)	Roston Drive	A47 (S)	Triumph Access
AM (07:30-09:30)	11	8	5	10
PM (16:30-18:30)	21	23	16	5

- 3.6.2 The total two-way flow of pedestrians and cyclists crossing each arm of the junction was generally 10 or fewer during the two-hour AM peak period. Movements during the equivalent PM peak period were generally higher at around 20 on most arms.
- 3.6.3 The majority of movements were across the A47 northern arm of the roundabout, towards the site during the AM peak hour and away from the site during the PM peak hour. On this arm, cycles accounted for the most crossing movements.

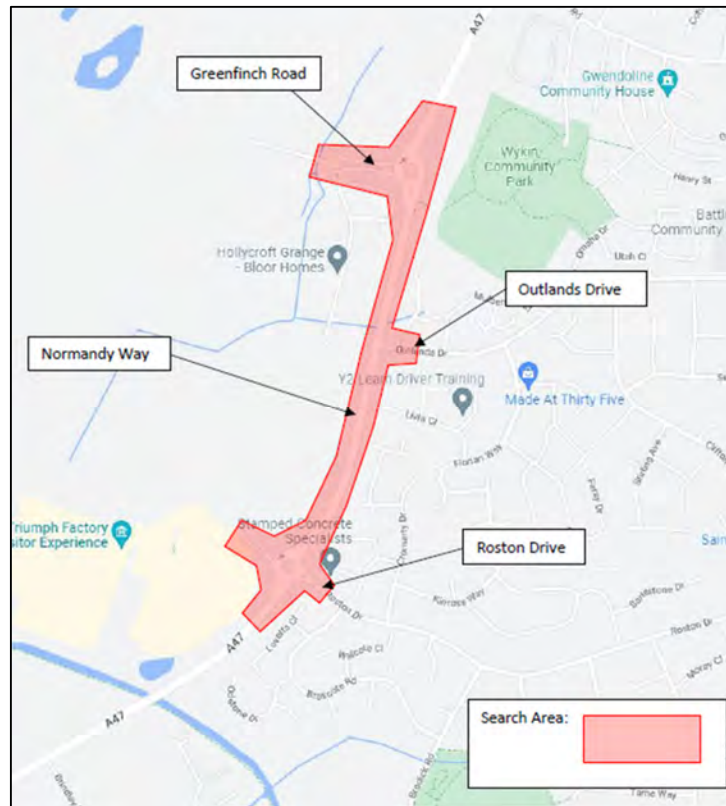
3.7 Vehicle Queues

- 3.7.1 The MCC surveys recorded queues on each approach to the surveyed junctions at 15-minute intervals throughout the peak periods.
- 3.7.2 The June 2022 surveys recorded significant queues on the A5 and A47 Dodwell's Road approaches to J1 (A5/A47 Dodwell's Roundabout). Mean maximum queues of more than 30 vehicles were recorded on Dodwells Road during each peak hour. On the A5, mean maximum queues of around 20 vehicles were recorded on each approach during the AM peak hour. During the PM peak hour, recorded queues were close to or in excess of 30 vehicles on the A5 approaches.
- 3.7.3 Queues on the approaches to J2 (Normandy Way/Roston Drive) were generally modest, but with some short-lived queues of over 10 vehicles on the Normandy Way (southbound) approach during the AM peak period.
- 3.7.4 Queues on the approaches to J3 (Normandy Way/Outlands Drive) and J4 (Normandy Way/Greenfinch Way) were negligible throughout the surveyed periods, with below 5 vehicles queued on each junction approach.
- 3.7.5 Queues were also recorded by the October 2022 MCC survey of J2 (Normandy Way/Roston Drive). This survey recorded generally lower queues than those recorded by the June 2022 survey.

3.8 Road Traffic Collision History

- 3.8.1 Records of Personal Injury Collisions (PICs) were provided by LCC for the 68-month (5.7-year) period 01/01/2017 to 31/08/2022. The extent of study area was the length of Normandy Way between the Roston Drive roundabout to the south, and Greenfinch Road roundabout to the north, including both junctions.
- 3.8.2 The extent of the search area is shown in **Figure 3.3**. A copy of the PIC data received from LCC is provided in **Appendix C**.

Figure 3.3: Extent of Collision Study Area



- 3.8.3 During the period of interest, a single slight-injury PIC was recorded in the study area. The incident occurred at the Normandy Way/Outlands Drive junction during April 2021, during daylight and in fine weather conditions. The description suggests that a vehicle emerging from Outlands Drive collided with an approaching northbound car on Normandy Way.
- 3.8.4 There is good visibility and street lighting at the junction and there are no clear engineering layout or geometric shortcomings that would give rise to the road safety issues at this location.
- 3.8.5 Whilst all road accidents are regrettable, the number of PICs recorded in the study area is considered low relative to the length and types of roads considered, the volume of traffic using them and the presence of three major junctions. The average rate of collisions for the study area as a whole is below 0.2 PICs per year, despite Normandy Way being a major classified road that carries over 16,000 vehicles per day.

- 3.8.6 This TA shows that additional traffic flows generated by the proposed development would not be significant at most locations and are therefore not expected to give rise to any material detriment to road safety.
- 3.8.7 It is therefore concluded that there are no trends or patterns of collisions that could be exacerbated by the forecast level of traffic generated by the proposed development.

4.0 SUSTAINABLE TRAVEL OPPORTUNITIES

4.1 Walking

4.1.1 Guidance on walking distances to local amenities is provided in the Chartered Institution of Highways and Transportation (CIHT) document, *"Providing for Journeys on Foot"* (2000). The Guidelines indicate that a walking distance of 400m is acceptable for trips within town centres and that a distance of 800m is acceptable elsewhere. The corresponding walking distances for commuting or school trips are given as 500m (desirable) and 1km (acceptable). A "preferred maximum" walking distance of 2km is identified.

4.1.2 The 2km distance was subsequently adopted in central government guidance and was incorporated into the former PPG13 advice note, which stated that:

"Walking is the most important mode of travel at the local level and offers the greatest potential to replace short car trips, particularly those under two kilometres".

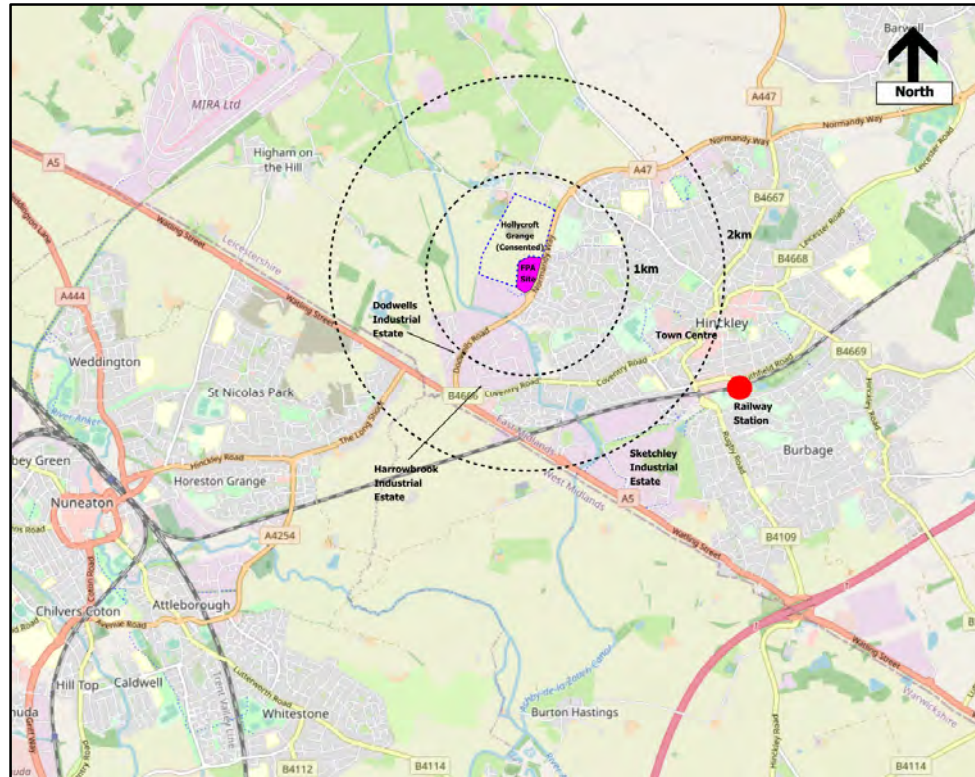
4.1.3 Current guidance within the Manual for Streets (MfS) continues to adopt this guidance. Paragraph 4.4.1 of MfS states that:

"Walkable neighbourhoods are typically characterised by having a range of facilities within 10 minutes' (up to about 800m) walking distance of residential areas which residents may access comfortably on foot. However, this is not an upper limit and PPS13 states that walking offers the greatest potential to replace short car trips, particularly those under 2 km."

4.1.4 These guideline distances remain in use by local authorities to determine access to facilities by walking. The CIHT Guidance advises that the 400m distance is equivalent to an approximate walking time of 5 minutes and this standard is typically adopted as the desirable maximum walking distance to local bus services. The corresponding walking distances of 1km and 2km are equivalent to approximately 12 minute and 25-minute walk times respectively.

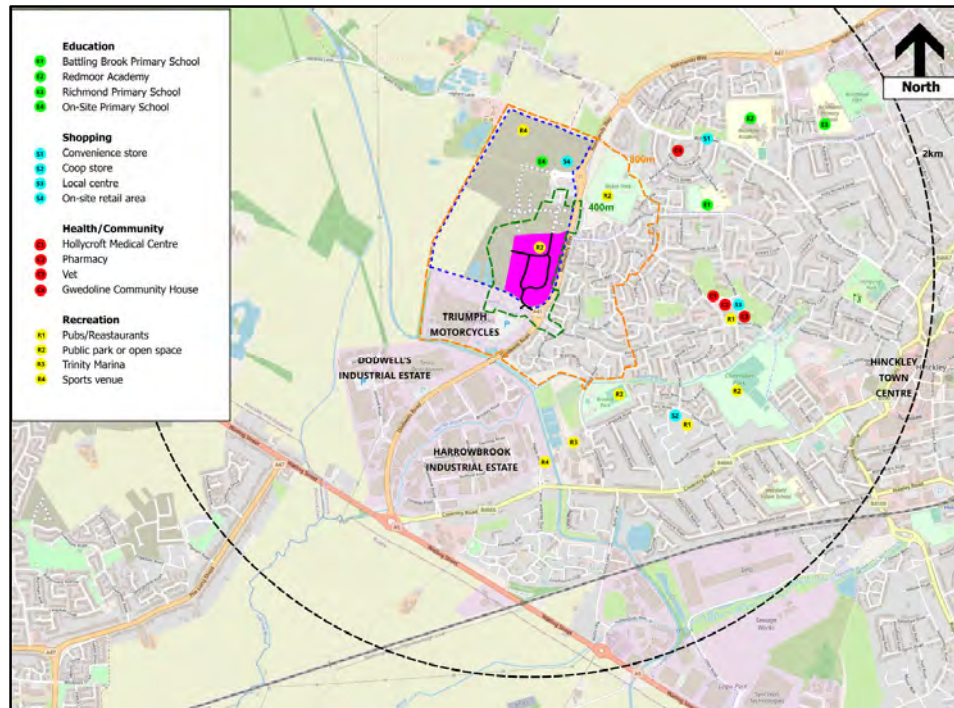
4.1.5 **Figure 4.1** shows catchment radii of approximately 1km and 2km from the centre of the site. Whilst these are not truly representative of actual walking distances to a particular location, they provide an indication of the areas that could potentially be reached on foot and may therefore attract significant pedestrian movements.

Figure 4.1: Walking Catchment and Local Facilities



- 4.1.6 The Dodwell's and Harrowbrook industrial estates are major trip attractors within the 1km distance. There are also local shops within approximately 1km of the site (see below).
- 4.1.7 Hinckley town centre lies within the 2km distance and contains a wide range of facilities including shops, restaurants, pubs, banks, etc. Hinckley railway station lies just beyond the 2km distance.
- 4.1.8 **Figure 4.2** provides a more detailed overview of the nearest local amenities that could be reached within indicative walking distances of 400m and 800m from the approximate centre of the site, as well as those lying within the wider 2km catchment.
- 4.1.9 Larger scale versions of Figures 4.1 and 4.2 are provided in **Appendix D**.

Figure 4.2: Local Facilities and Walking Isochrones – 400m and 800m



4.1.10 The proposed Hollycroft Grange local centre lies just north of the 400m isochrone and will include a primary school and retail facilities (references E4 and S4 on Figure 4.2). Bus stops within Hollycroft Grange are to be provided within a 400m walking distance of all dwellings within the scheme and a local bus service is to be provided (see Section 4.3 below).

4.1.11 Within a walking distance of 800m, a range of recreation spaces and opportunities is available, including Wykin Park, Brodick Park and proposed sports fields within the Hollycroft grange scheme. The Triumph Motorcycles employment area also lies within this distance.

4.1.12 The major pedestrian desire lines generated by the scheme are expected to be as follows:

- South along Dodwell's Road to the Dodwell's and Harrowbrook employment areas;
- North through Hollycroft Grange to reach the proposed school and shops;
- North along Normandy Way to schools and major retail facilities adjacent to Stoke Road;
- East along Roston Drive and Outlands Drive to reach Hinckley town centre and

the Hollycroft local centre (reference S3 on Figure 4.2).

- 4.1.13 Hinckley town centre and a significant part of the adjacent urban area can be reached within the maximum 2km walking distance specified in the relevant guidance. The bus hubs at The Crescent and the railway station lie at the edge of the 2km catchment. The proximity of these facilities offers scope for development trips to be undertaken on foot for a wide range of purposes including employment, leisure, shopping and education as well as to connect with the wider public transport network.
- 4.1.14 The site therefore lies within a comfortable walking distance of a full range facilities, in accordance with the recommended maximum walking distances advised in the CIHT and MfS guidance.
- 4.1.15 All roads adjoining the site have footways and are well lit. The network of roads with footways and other footpaths that permeates the adjacent residential area to the east is extensive and provides direct and convenient links to local amenities and employment areas.
- 4.1.16 To maximise opportunities for walking to these areas, improvements to pedestrian facilities and connections to the site are proposed in Section 5 of this TA. These include:
- New TOUCAN pedestrian/cycle crossing of Normandy Way at the Roston Drive roundabout;
 - Uncontrolled pedestrian crossing (also suitable for cyclists) of Normandy Way at the junction with Outlands Drive;
 - Pedestrian/cycle accesses to the development from Normandy Way west of the proposed new crossings;
 - Foot/cycleways along the development Spine Road and throughout Hollycroft Grange, connecting with other parts of the ongoing development.

4.2 Cycling

- 4.2.1 Guidance in the former Planning Policy Guidance Note 13 (PPG13) included advice on cycling journey lengths. Although PPG13 has since been superseded, it is still commonly accepted that cycling offers strong potential to replace car trips for many journeys under 5km or those made as part of a multi-modal trip that includes cycling

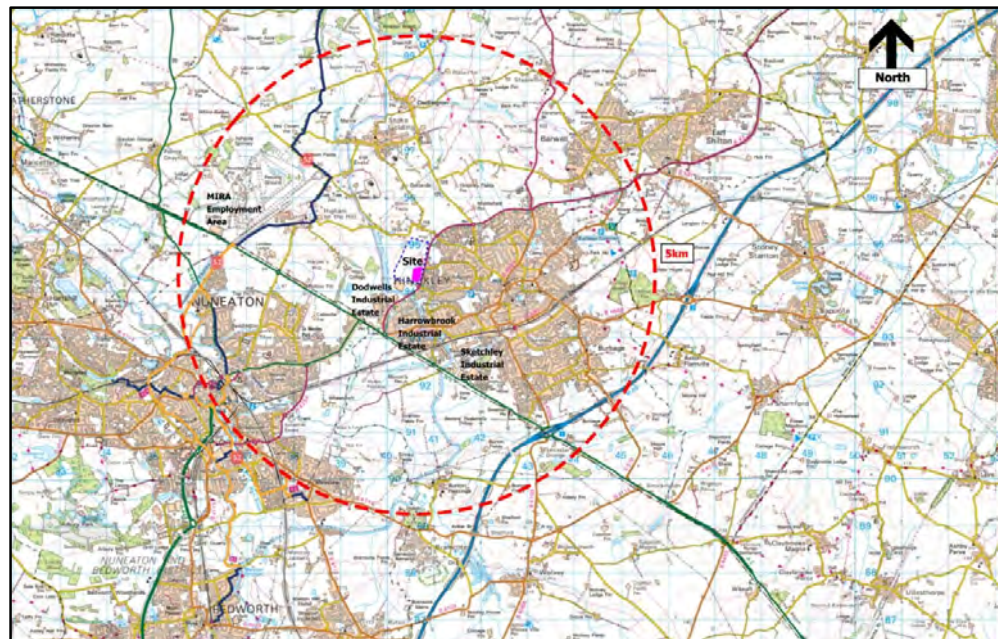
and public transport. A 5km distance is equivalent to a typical cycling time of 15 to 20 minutes.

- 4.2.2 More recent DfT guidance contained in LTN1/20, *Cycle Infrastructure Design (DfT, July 2021)* is somewhat more ambitious and states that:

"Two out of every three personal trips are less than five miles in length – an achievable distance to cycle for most people..."

- 4.2.3 **Figure 4.3** shows an indicative cycle catchment radius for the more conservative 5km distance centred on the site. The National Cycle Network (NCN) routes within this area are also shown.

Figure 4.3: Cycling Catchment and Routes



- 4.2.4 The topography within this area is generally flat or subject to gentle gradients and therefore potentially attractive to existing and potential cyclists.
- 4.2.5 The catchment area includes a range of on and off-road cycle routes such as the existing shared-use foot/cycleways along the east side of Normandy Way, Outlands Drive and the A5 between Dodwell's Roundabout and The Long Shoot. NCN Route 52 connects Nuneaton with the MIRA employment area and open countryside to the north. It can be accessed using Wykin Road.
- 4.2.6 A significant developed area lies within 5km of the site, including:

- Hinckley (entire urban area);
- Hinckley and Nuneaton railway stations;
- Nuneaton town centre;
- Barwell;
- Dodwell's, Harrowbrook and Sketchley employment areas;
- MIRA employment area;
- Other employment areas on the east side of Nuneaton.

4.2.7 There are therefore significant employment, retail and leisure opportunities within the cycling catchment area that would be attractive to residents of the proposed development. The favourable conditions offer potential for many trips generated by the development to be undertaken by cycling, including multi-modal commuter trips to the station for onward travel by rail.

4.2.8 To maximise the opportunities for cycling to/from the development, improved links across Normandy Way are proposed to assist in connecting the development with Hinckley town centre and railway station and the local employment areas to the south. These improvements include the new pedestrian and cycle crossings of Normandy Way as described in Section 5 of this TA.

4.3 Bus Services

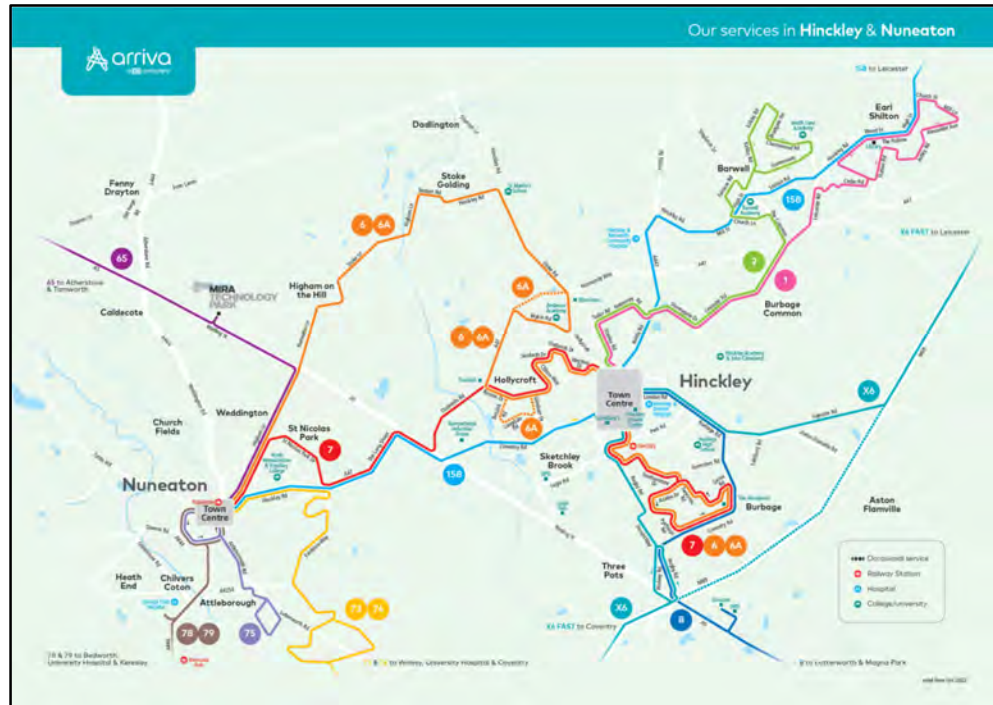
4.3.1 The area adjacent to the site is well-served by existing bus services. The nearest bus routes are:

- Routes 6 and 6A: Burbage to Hinckley, Hollycroft and Nuneaton via Stoke Road and Higham Lane;
- Route 7: Burbage to Hinckley, Hollycroft and Nuneaton via Dodwell's Road and The Long Shoot.

4.3.2 Both services pass close to the site on Roston Drive, providing a combined frequency of 1 bus every 30 minutes to Hinckley and Nuneaton town centres, Monday to Saturday. Weekday buses operate from around 07:00 to 19:00.

- 4.3.3 Current timetable and route information is provided in **Appendix E**. The current bus operator route map for Hinckley is reproduced as **Figure 4.4**.

Figure 4.4: Hinckley Area Bus Route Network (Source: Arriva)



- 4.3.4 Existing bus services to the main destinations of travel from the development site are reasonably comprehensive and would therefore provide an attractive travel option for future residents as an alternative to private car use.
- 4.3.5 Access to bus services within Hollycroft Grange is to be improved by provision of bus stops along the internal development Spine Road and the routing of buses to and from the site.
- 4.3.6 Condition 10 of the outline planning consent for Hollycroft Grange (*HBBC Planning Ref:15/00188/OUT*) required the submission and approval of a *Public Transport Strategy*, to include details of a proposed new bus route for the development. Further to this, the *Public Transport Strategy* dated August 2021 was approved by HBBC in respect of Phases 1 and 2 (*planning ref: 21/00512/DISCOM*). Details of the approved strategy are provided in **Appendix F**.
- 4.3.7 The approved bus route commences on Greenfinch Road, west of Normandy Way. It will run at a 30-minute frequency to and from the town centre via Normandy Way

Roston Drive, Brodick Road and Coventry Road. The service is subject to 6-monthly reviews over a 5-year period commencing at the occupation of the 50th dwelling.

- 4.3.8 Whilst this service has been deemed sufficient to meet the needs of the approved Hollycroft Grange development, the FPA and the associated second access at Roston Drive would improve access to the service from all parts of Hollycroft Grange.
- 4.3.9 There are existing bus stops on Roston Drive at the junction with Brascote Road, which are within approximately 400m walking distance of the centre of the FPA site and would therefore be accessible for residents of the proposed Phase 4 development. However, the extended Spine Road within the development site would be provided to a standard that would accommodate the proposed new bus service (as detailed in Section 5) and is expected to include additional bus stops.
- 4.3.10 The approved Public Transport Strategy would be modified accordingly to include the additional development proposed by the FPA.

4.4 Rail Services

- 4.4.1 Rail services can be accessed at Hinckley railway station, which lies just over 2km from the centre of the site. It could therefore be accessed on foot or by cycle via Outlands Drive or Roston Drive. It can also be reached using the bus services identified above.
- 4.4.2 Hinckley station is operated by East Midlands Railway and lies on the Birmingham to Peterborough railway line. The station has various facilities including a ticket office, toilets, cycle parking, shelters, seating, step free access to platforms and customer help points.
- 4.4.3 From Hinckley, there are regular hourly train services to Leicester and Birmingham New Street via Nuneaton throughout the day. Typical journey times are approximately 20 minutes to Leicester and around 40 minutes to Birmingham. Fast services to London are also available by changing at Nuneaton.
- 4.4.4 Rail services would therefore be an attractive travel option for commuter trips to Leicester, Nuneaton and Birmingham, or longer distance trips to London and other destinations.
- 4.4.5 Access to the railway station on foot and by cycle will be encouraged through the provision of enhanced crossing facilities at Normandy Way, as described in Section 5 of this TA.

5.0 DEVELOPMENT ACCESS ARRANGEMENTS

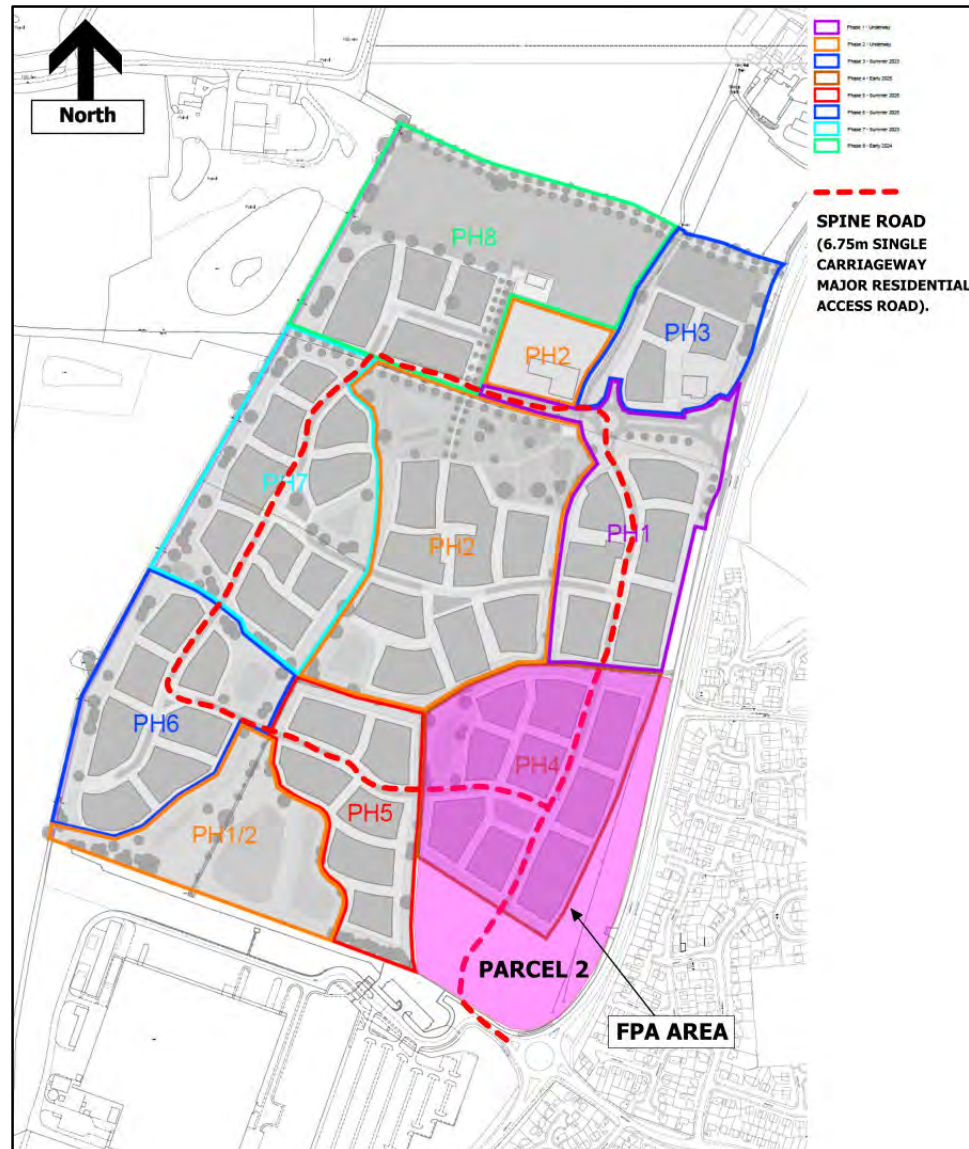
5.1 Proposed Development

- 5.1.1 The proposed development comprises a re-planned layout within Phase 4 of the approved Hollycroft Grange scheme, which lies at its south-eastern corner, and the development of adjacent land Parcel 2. The scheme would provide 153 dwellings, increasing the total within Hollycroft Grange from 850 to 1,003 (i.e. - 153 dwellings more than currently approved).
- 5.1.2 The scheme would also provide the additional access from Normandy Way via Roston Drive, thus improving access to all other approved residential and non-residential land uses within Hollycroft Grange.
- 5.1.3 The development planning layout is included in **Appendix G**.

5.2 Highway Access

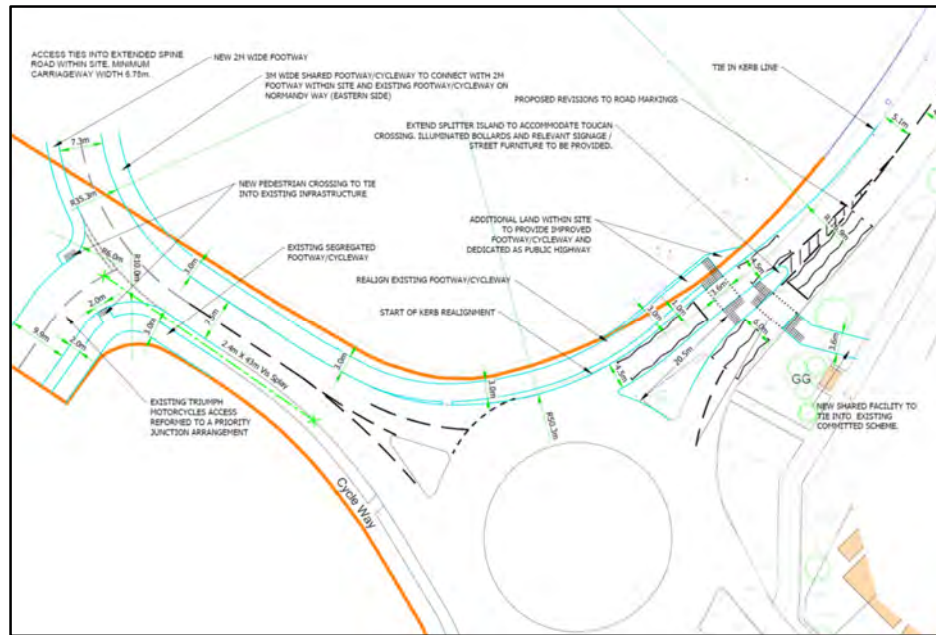
- 5.2.1 **Figure 5.1** illustrates proposed access arrangements and the route of the extended Spine Road that would connect with the rest of Hollycroft Grange.

Figure 5.1: Illustrative Access Strategy



- 5.2.2 The extended Spine Road would connect with Normandy Way at Roston Drive. It would be a 6.75m single carriageway road, designed in accordance with the Leicestershire Highways Design Guide (LHDG) standard for a *Major Residential Access Road* and suitable for use by bus services. The scheme would therefore connect Hollycroft Grange to Normandy Way at two locations, significantly improving connectivity within the site and the distribution of development traffic, compared with the currently permitted single access arrangement.
- 5.2.3 The proposed layout of the Spine Road extension is shown on **Drawing C21021/DR001**. An extract from this drawing is shown in **Figure 5.2**.

Figure 5.2: Proposed Development Access Arrangements

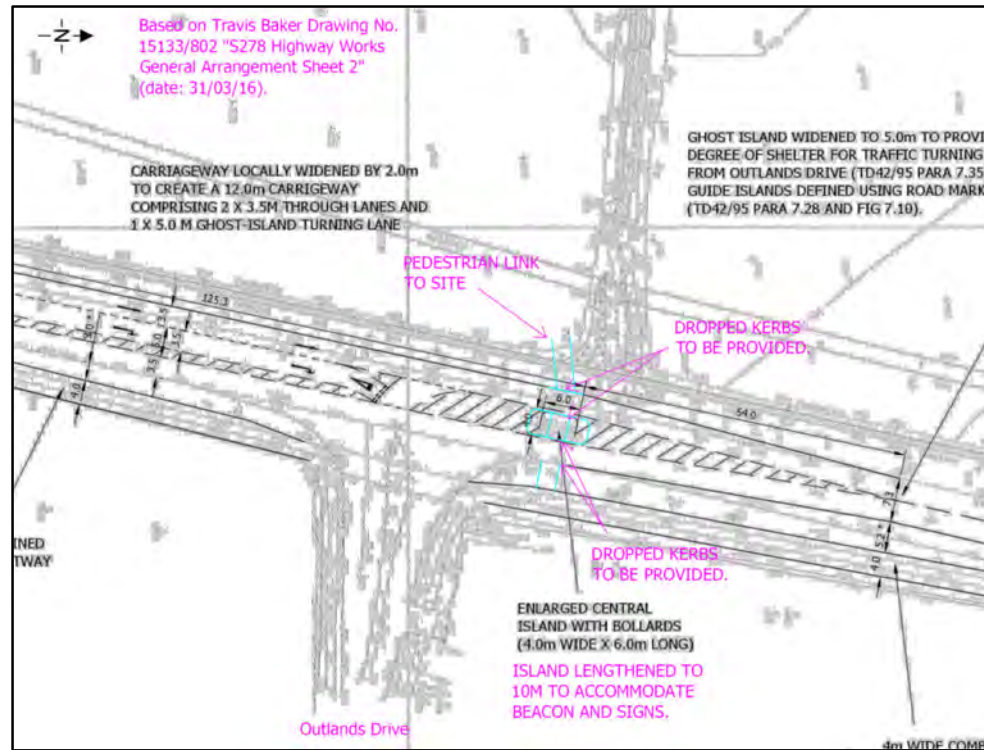


- 5.2.4 The Triumph Motorcycles access would be modified to become a priority 'T' junction arrangement with a 6m corner radius on its western side and a 10m radius on the eastern side. The latter would facilitate access by large goods vehicles. An uncontrolled pedestrian crossing of the Triumph access would be provided within the junction bell-mouth area. The revised junction arrangement would provide visibility splays of 2.4m by 43m, suitable for vehicle speeds of up to a 30mph. However, the Spine Road itself would have a design speed of 20mph in accordance with the LHDG (see below).

5.3 Walking and Cycling

- 5.3.1 The existing Normandy Way/Greenfinch Road Roundabout provides high quality pedestrian and cycle infrastructure, including signal-controlled crossings of the western and southern arms. These have been deemed sufficient to serve the demands generated by the approved Hollycroft Grange development.
- 5.3.2 The proposed new connection of the Spine Road with Roston Drive is expected to increase the demand for pedestrian and cycle movement across Normandy Way at that location. The traffic survey data reported in Section 3 shows that the Normandy Way northern arm of the roundabout currently carries the majority of pedestrian and cycle crossing movements that occur at the junction. This arm would also be on a direct desire line from the FPA development to Roston Drive and is therefore expected to be used by pedestrian and cycle traffic generated by the development.
- 5.3.3 Improved crossing facilities at this location are proposed to accommodate increased demand. The improvement comprises a new TOUCAN crossing of Normandy Way, to the north of the roundabout as shown on **Drawing C21021/DR001**. The scheme would maximise connectivity between the development, Hinckley town centre to the east and the major employment areas to the south.
- 5.3.4 A pedestrian link to the development from Normandy Way is also proposed at Outlands Drive, which provides an alternative route to Hinckley town centre. There is a committed scheme at this location to provide a new 4m wide traffic island as part of the Section 278 (S278) highway works to be delivered by the currently consented development. To serve the FPA scheme, it is proposed that this island is further lengthened and dropped kerbs provided, thus creating a refuge area for pedestrians and cyclists. New footway/cycleway connections would be provided on Normandy Way at each side of the island to complete an uncontrolled crossing facility. The elements of this proposal are illustrated as an enhancement of the current S278 scheme on **Drawing C21021/DR002**. An extract is shown as **Figure 5.3** below.

Figure 5.3: Proposed Crossing Facility at Outlands Drive



- 5.3.5 It is considered that these schemes would maximise the ease and safety with which active travel modes can reach the site, in conjunction with the existing pedestrian and cycle infrastructure at the Normandy Way/Greenfinch Road roundabout.
- 5.3.6 The development Spine Road would have a 2.0m footway along both sides. This is consistent with the standard of provision on those sections of the approved Spine Road further north, to which it would connect.
- 5.3.7 Traffic-free walking and cycling routes would also be provided within the development and around its perimeter, connecting the proposed dwellings with Normandy Way and the Spine Road.
- 5.3.8 Junctions with other roads within the development would have pedestrian crossing points with tactile paving within the junction areas.
- 5.3.9 The internal layout of the development would be designed to create a safe and low-speed environment that gives priority to pedestrians and encourages walking. To achieve this, the Spine Road has been designed with significant changes in direction at 3 locations along its length, thus avoiding long sections of straight road that could encourage higher traffic speeds.

5.4 Public Transport Access

- 5.4.1 The Spine Road extension to Roston Drive has been designed to accommodate bus services. Vehicle swept path analysis has been undertaken to ensure that the proposed alignment is suitable for the design vehicle specified in the LHDG (see Section 5.5 below).
- 5.4.2 Bus stops would be provided along the Spine Road at locations and to a specification that would be agreed with LCC. As indicated on Figure 4.2, all dwellings within the FPA scheme would be within 400m or less of the bus route. Bus stops would be positioned such that most dwellings would be within a 250m walk or less.

5.5 Swept Path Analysis

- 5.5.1 Vehicle swept path analysis of the proposed Spine Road junction with Roston Drive and the Triumph Motorcycles factory has been undertaken for a maximum-legal length articulated heavy goods vehicle (HGV) and a large pantechicon as shown on **Drawing C21021/DR003**, which shows that these design vehicles can be accommodated.
- 5.5.2 Vehicle swept path analysis of the Spine Road has been undertaken to demonstrate that it would satisfactorily accommodate bus services. In accordance with the LHDG, vehicle tracking has been undertaken using a 15m long rigid bus, although this size of vehicle is considered unlikely to serve the development and in practice smaller vehicles are expected. The swept paths are shown on **Drawings C21021/DR004 to DR011** and demonstrate that a bus travelling along the Spine Road in each direction would be able to pass a large car travelling in the opposite direction.
- 5.5.3 Vehicle swept path analysis of the proposed internal road and turning head layouts has been undertaken for a HBBC standard refuse collection vehicle (RCV) as approved in respect of Hollycroft Grange Phase 7 (HBBC planning ref: 21/01262/REM). The swept path analysis is shown on the **Drawings C21021/DR012 to DR016**.
- 5.5.4 These drawings demonstrate that the design vehicle would be able to access the site and manoeuvre within it such that the design RCV could enter and leave in a forward gear.

- 5.5.5 In accordance with Manual for Streets, the layout of the site would generally optimise total refuse collection drag distances to below 30m for residents and 25m for waste collection operatives, enabling refuse to be collected from all properties.

5.6 Mobility-Impaired Users

- 5.6.1 The detailed design of both the development and associated infrastructure would be undertaken in accordance with the requirements of relevant disability discrimination legislation and current good practice.

5.7 Vehicle Parking

- 5.7.1 The NPPF requires local authorities to set car parking standards for new development, taking into account:
- The development's accessibility;
 - Development type and mix;
 - Availability of/opportunity to provide public transport;
 - Local car ownership levels;
 - Need provide for plug-in charging of low-emission vehicles.
- 5.7.2 The Local Plan requirements for car parking are set out in Policy DM18 of the *Site Allocations & Development Management Policies DPD*. This policy sets no specific standards but states that the level of parking provided should be appropriate to the site's location and its accessibility by non-car travel modes.
- 5.7.3 It is therefore considered that parking within the FPA scheme should be consistent with provision agreed in respect of the consented phases in Hollycroft Grange. The recent Reserved Matters (RM) application for Phase 7 to the west of the FPA site (HBBC ref: 21/01262/REM) included a parking schedule that generally provided parking at the following rates:
- 2-bed dwellings: 2 spaces per dwelling;
 - 3-bed dwellings: 2 spaces per dwelling;
 - 4-bed dwellings: 3 spaces per dwelling.

- 5.7.4 The FPA scheme will provide on-plot parking generally in accordance with the above rates.
- 5.7.5 Secure cycle parking will be provided within the curtilage of each dwelling, either in garages where provided or in cycle stores otherwise.

6.0 DEVELOPMENT TRIP GENERATION

6.1 Overview

- 6.1.1 This section of the TA report provides estimates of the traffic generation of each planning application and the resulting net traffic flow changes on the local highway network. The forecasts are then used to confirm the extent of the study area that needs to be considered by this TA.

6.2 Approved Development

- 6.2.1 The highway requirements of the consented development of Parcel 1 (Hollycroft Grange) were addressed within a Transport Assessment (TA) dated February 2015, and various supplementary assessments, prepared by Northern Transport Planning (NTP).
- 6.2.2 The 2015 TA was based on vehicle trip rates that were agreed following extensive discussions between NTP and LCC. The trip rates for the residential element were originally derived from the TRICS database and are summarised in **Table 6.1**.

Table 6.1: Vehicle Trip Rates Per Dwelling (2015 TA, NTP Ltd)

Time Period	Arrival	Departure	Two-Way
AM (08:00-09:00)	0.148	0.425	0.573
PM (17:00-18:00)	0.409	0.244	0.653

- 6.2.3 The previous TA was based on a residential scheme of 850 dwellings and Parcel 1 has outline planning consent for this quantum of development. The resulting traffic generation forecasts (using the above trip rates) are summarised in **Table 6.2**.

Table 6.2: Traffic Generation of 850 Dwellings - Vehicles (2015 Trip Rates)

Time Period	Arrival	Departure	Two-Way
AM (08:00-09:00)	126	361	487
PM (17:00-18:00)	348	207	555

* Totals may not sum exactly due to rounding of decimal places.

- 6.2.4 The TA therefore considered the traffic impact and highway capacity implications of 487 two-way residential trips during the morning peak hour and 555 two-way residential trips during the evening peak hour. All residential traffic was assumed to reach the external highway network using the Normandy Way/Greenfinch Road roundabout. The other complementary land uses within Parcel 1 (primary school and convenience store) are unaffected by the FPA and do not need to be considered.

6.3 Updated Trip Rates

6.3.1 The accepted 2015 trip rates are now more than 5 years old and may not reflect more recently observed trends in vehicle traffic generation. An updated assessment trip generation rates has therefore been undertaken using the TRICS database (v.7.9.3).

6.3.2 The new TRICS interrogation adopts the following main assumptions:

- Residential/Private-owned houses
- Multi-modal surveys
- All regions included except Greater London and Ireland
- Range of sites – from 6 to 491 dwellings
- Weekday surveys only
- Date range from 01/01/14 to 30/06/22
- Locations: Edge of Town & Neighbourhood Centres
- Location sub-categories: Residential zone; Out of Town; No sub-category
- Total number of surveys remaining: 49.

6.3.3 The full TRICS output is provided in **Appendix H**. The resulting peak hour trip rates are presented in **Table 6.3**.

Table 6.3: Residential Vehicle Trips/Dwelling (TRICS v7.9.3)

Time Period	Arrival	Departure	Two-Way
AM (08:00-09:00)	0.136	0.372	0.508
PM (17:00-18:00)	0.336	0.142	0.478

6.3.4 The trip rates shown above are lower than those used in the original TA, particularly during the PM peak hour. This is consistent with observations of a general reduction in peak period residential trip rates over recent years.

6.3.5 The approved 2015 trip rates also do not reflect more recent changes to travel behaviour that occurred during the COVID-19 pandemic. This is likely to have increased the proportion of employees working at home for at least some of the working week and is likely to have reduced peak period vehicle trip rates.

- 6.3.6 In the new TRICS interrogation, four of the surveys in the data set were undertaken during pandemic conditions. Two of these had total peak hour movements either side of the 85th percentile range (100th, and 71st percentiles) and the remaining two were around the 15th percentile range (4th and 31st percentiles). On balance, including the COVID period surveys in the TRICS run is not expected to unduly influence the sample results.
- 6.3.7 In addition, when using the TRICS cross-test facility, both the AM and PM peak hours returned a cross-test value of 0.8%. The updated TRICS assessment is therefore considered to provide reliable and more up-to-date assessment of the traffic generation of Hollycroft Grange.
- 6.3.8 Notwithstanding this conclusion, it has been agreed with LCC and NH that the 2015 trip rates will be used to assess the traffic generation of the FPA scheme, for consistency with the currently approved Hollycroft Grange development. However, the implications of applying the more recent trip rates are considered in Section 6.5 below.

6.4 Traffic Generation – FPA Scheme

- 6.4.1 The 2015 trip rates from Table 6.1 can be applied to a total scheme at Hollycroft Grange of 1,003 dwellings, comprising the 850 dwellings as currently approved and the additional 153 dwellings proposed by the FPA. **Table 6.4** provides the resulting traffic generation forecasts for the extended Hollycroft Grange as a whole.

Table 6.4: Vehicle Traffic Generation – 1003 Dwellings at Hollycroft Grange

Time Period	Arrival	Departure	Two-Way
AM (08:00-09:00)	148	426	575
PM (17:00-18:00)	410	245	655

* Totals may not sum exactly due to rounding of decimal places.

- 6.4.2 The net increases in traffic generation compared with that of the approved scheme (Table 6.2) are summarised in **Table 6.5**.

Table 6.5: Vehicle Traffic Generation – Net Increase of 153 Dwellings

Time Period	Arrival	Departure	Two-Way
AM (08:00-09:00)	23	65	88
PM (17:00-18:00)	63	37	100

- 6.4.3 Table 6.5 shows that the overall scheme at Hollycroft Grange resulting from the FPA would generate up to approximately 100 more trips per hour than that permitted by the outline planning consent, based on the original TA trip rates. The impact of these trips on the adjacent highway network is considered in Sections 7 and 8.

6.4.4 No allowance has been made within this assessment for dwellings that were already occupied at the time of the June 2022 traffic surveys, thus building a further layer of robustness into the calculations that follow.

6.4.5 It should also be noted that the capacity assessment calculations have been undertaken for 180 additional dwellings, which was the number proposed during the scheme development stage. This would give rise to marginally higher traffic generation: an additional 15 vehicles during the AM peak hour and 18 vehicles during the PM peak hour. Whilst these increases are modest, they result in the capacity assessments being robust for the reduced level of development now proposed.

6.5 Traffic Generation – Alternative Assessment

6.5.1 Applying the more recent TRICS trip rates from Table 6.3 to the proposed total development of 1,003 dwellings at Hollycroft Grange provides alternative traffic generation forecasts as summarised in **Table 6.6**.

Table 6.6: Vehicle Traffic Generation – 1003 Dwellings (2022 Trip Rates)

Time Period	Arrival	Departure	Two-Way
AM (08:00-09:00)	136	373	510
PM (17:00-18:00)	337	142	479

* Totals may not sum exactly due to rounding of decimal places.

6.5.2 The difference between these alternative forecasts for a 1,003-dwelling scheme (Table 6.6) and those originally approved for the 850-dwelling scheme (Table 6.2) are summarised in **Table 6.7**.

Table 6.7: Change in Traffic Generation (Updated vs. Original Forecasts)

Time Period	Arrival	Departure	Two-Way
AM (08:00-09:00)	11	12	22
PM (17:00-18:00)	-11	-65	-76

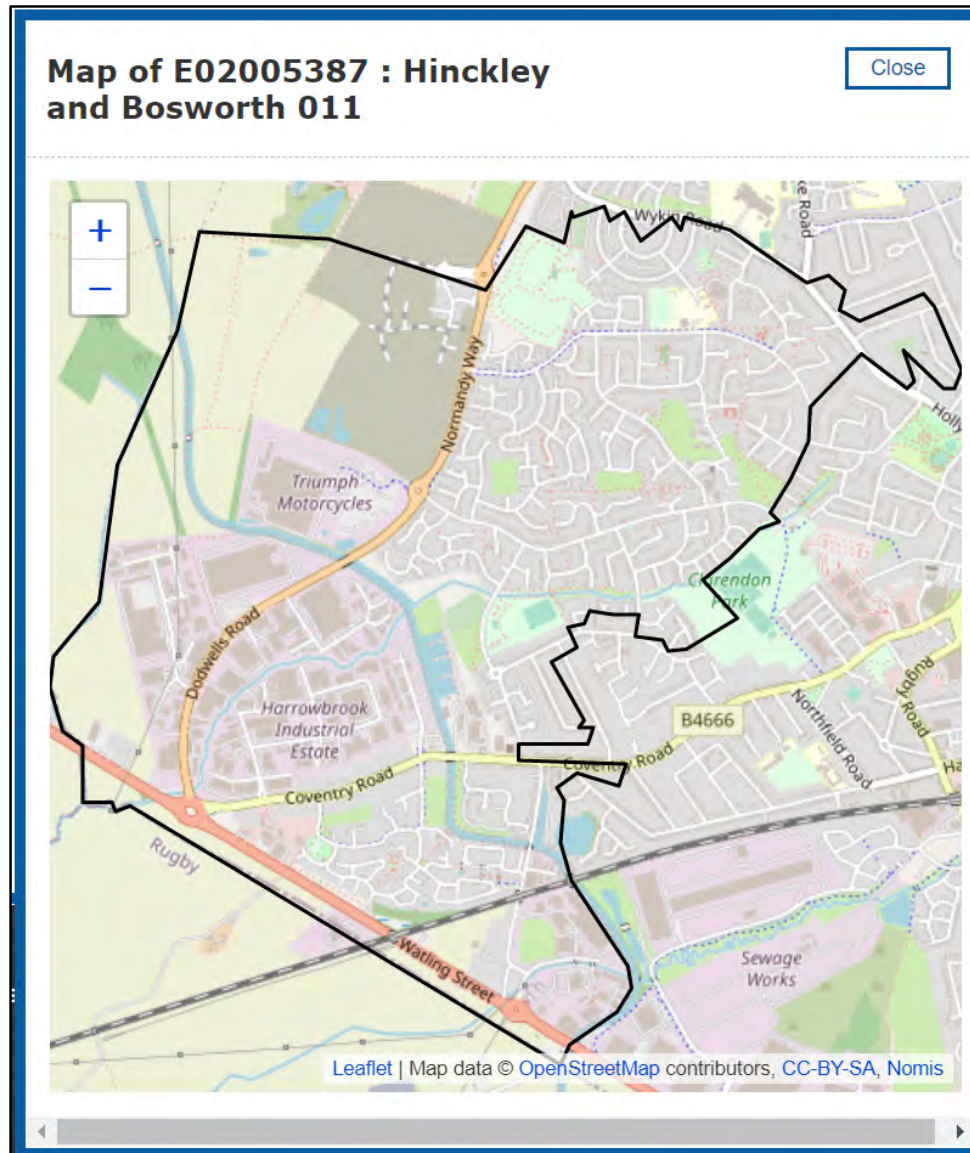
6.5.3 During the AM peak hour, an increase of 22 two-way vehicle trips is forecast when compared to the consented level of traffic generation. A significant reduction of 76 two-way vehicle trips is forecast during the PM peak hour.

6.5.4 The use of updated trips rates would result in the expanded scheme generating no significant increase in the total vehicle movements to and from the site, compared with the level previously approved. Sections 6 and 7 of this TA are based on the older 2015 trip rates, and therefore provide a highly robust assessment of traffic and highway capacity.

6.6 Trip Distribution

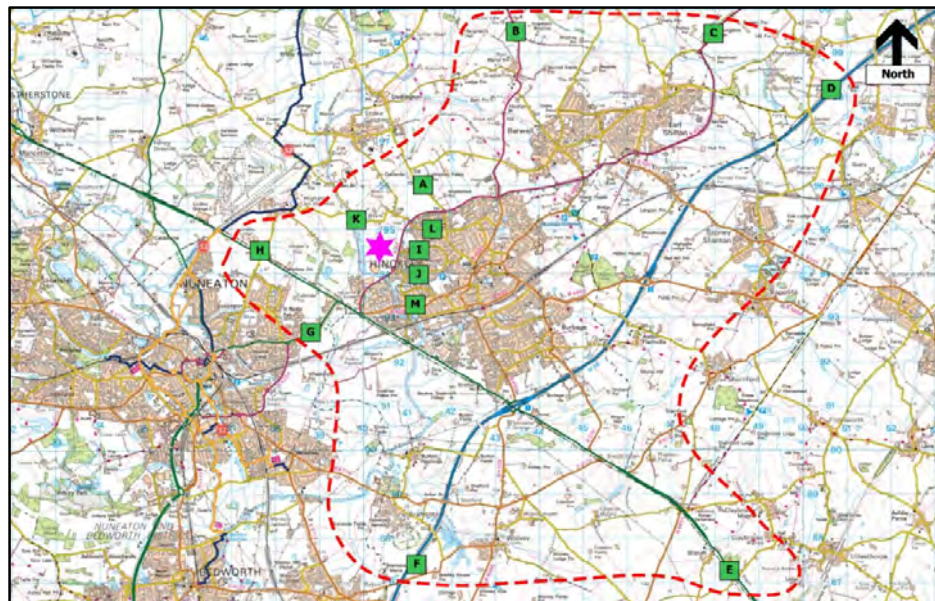
- 6.6.1 The distribution of development traffic on the adjacent highway network has been estimated using population and travel-to-work data from the 2011 National Census statistics. The development site is located in the Hinckley and Bosworth 011 Mid-Layer Super-Output Area (MSOA), which includes the existing residential areas served by Roston Drive and Outlands Drive to the east of Hollycroft Grange, and the employment areas to the south. The MSOA is therefore considered representative of the likely trip characteristics of the proposed development. **Figure 6.1** shows the MSOA boundaries.

Figure 6.1: Hinckley and Bosworth 011 MSOA Boundary



- 6.6.2 The residential trip distribution model is based on “car driver” trips from the Hinckley and Bosworth 011 MSOA to all local MSOAs within the HBBC local authority area and all other local borough, district and unitary authorities in the UK.
- 6.6.3 *Google Maps* was used to provide an indication of the quickest peak period routes between the local MSOA and the various origins/destinations. Where alternative routes were identified, these were manually weighted in accordance with their relative travel times. The trip distribution calculations and resulting traffic assignments are presented in **Appendix I**.
- 6.6.4 The routes included in the trip distribution model are shown on **Figure 6.2**.

Figure 6.2: Trip Distribution Routes and Cordon



- 6.6.5 The percentage distribution of trips amongst these routes is summarised in **Table 6.8** below.

Table 6.8: Trip Distribution Summary

ROUTE		%
A	STOKE ROAD	0.6%
B	A447 NORTH	3.4%
C	A47 NORTH	13.6%
D	M69 NORTH	8.0%
E	A5 SOUTH	10.5%
F	M69 SOUTH	9.2%
G	A47 SOUTH	14.6%
H	A5 WEST	9.1%
I	OUTLANDS DRIVE	7.1%
J	ROSTON DRIVE	16.3%
K	WYKIN ROAD WEST	1.2%
L	WYKIN ROAD EAST	1.9%
M	B4666 COVENTRY ROAD	4.4%
TOTAL		100%

- 6.6.6 Table 6.8 indicates that a significant proportion of traffic would have origins/destinations within the Hinckley area (Routes I, J, L and M), accounting for approximately 30% of trips. The A47 to/from Nuneaton (Route G) would also account for approximately 15% of trips.
- 6.6.7 Longer distance traffic is forecast to use the A47 north (Route B), accounting for some 14% of trips; the A5 west (Route H) accounting for around 9% of trips; or M69 Junction 1, which would be used by around 28% of trips.
- 6.6.8 The results suggest that in the order of 51% of trips would use the A5 between the Dodwell's and Long Shoot junctions.
- 6.6.9 In terms of the north/south split of trips on Normandy Way, 27.9% would travel to and from the north (Routes A, B, C, K, L) or Outlands Drive (Route I). These trips are assumed to access Normandy Way at the Greenfinch Road roundabout. The remaining 72.1% would be to or from the south (Routes D, E, F, G H, J, and M) and are assumed to use the Roston Drive access.
- 6.6.10 The resulting development traffic flow forecasts at key study area locations are considered further in Section 7.

6.7 Modal Split

- 6.7.1 The modal split of development trips has been assessed by reference to the 2011 Method of Travel-to-Work census data (QS701EW) for the Hinckley 011 MSOA, which

includes the site and surrounding residential area. It is therefore considered to best represent the demographic characteristics of the proposed development.

6.7.2 A summary of the resulting modal splits is presented in **Table 6.9**. The modal share of car drivers within the local MSOA is around 76%. The MSOA data also shows a good level of sustainable travel, with bus, rail, walk, car share and cycle modes accounting on aggregate for some 22% of all trips. This suggests that a reasonable proportion of development trips could be accommodated on non-car and sustainable travel modes.

6.7.3 Based on the Census data, a total of 12.8% of trips would use walk or cycle modes and are therefore likely to cross Normandy Way.

Table 6.9 Modal Split (2011 Census)

From National Census 2011, Neighbourhood Statistics		PERSONS BY CATEGORY	MODAL SPLIT (% of trips made)
CAT	Group	E02005387: Hinckley and Bosworth 011	
-	All Usual Residents Aged 16 to 74	6,876	-
1	Work Mainly at or From Home	147	-
2	Underground, Metro, Light Rail, Tram	3	0.1%
3	Train	43	0.9%
4	Bus, Minibus or Coach	107	2.2%
5	Taxi	11	0.2%
6	Motorcycle, Scooter or Moped	51	1.1%
7	Driving a Car or Van	3,650	76.1%
8	Passenger in a Car or Van	294	6.1%
9	Bicycle	178	3.7%
10	On Foot	437	9.1%
11	Other Method of Travel to Work	20	0.4%
12	Not in Employment	1,935	-
Total		6876	
	Total Travelling (i.e. - exc. cat 1 and 12)	4794	100.0%

6.7.4 The above modal split provides a starting point for the setting of modal shift targets within the Residential Travel Plan (RTP). An updated version of the approved Hollycroft Grange RTP is to be submitted separately.

6.7.5 The proposed access strategy and connections with the sustainable travel network described in Section 5 seek to support the use of walking, cycling and local bus services by residents of the proposed development.

6.7.6 A summary of the number of additional generated trips by each mode, using the above modal split is provided in **Table 6.10**.

Table 6.10: Forecast Trip Generation by Travel Mode (Current Modal Split)

MODE OF TRAVEL	MODE SHARE	2-WAY PERSON TRIPS	
		AM PEAK HOUR	PM PEAK HOUR
Underground, Metro, Light Rail, Tram	0.1%	0	0
Train	0.9%	1	1
Bus, Minibus or Coach	2.2%	3	3
Taxi	0.2%	0	0
Motorcycle, Scooter or Moped	1.1%	1	2
<i>Driving a Car or Van</i>	<i>76.1%</i>	<i>100</i>	<i>118</i>
Passenger in a Car or Van	6.1%	8	10
Bicycle	3.7%	5	6
On Foot	9.1%	12	14
Other Method of Travel to Work	0.4%	1	1
Total	100.0%	131	155

6.7.7 The FPA development is therefore forecast to generate up to 3 bus journeys per hour; up to 14 pedestrian trips per hour; and up to 6 cycle trips per hour during the peak travel demand periods.

6.7.8 The generated pedestrian trips would result in additional crossing movements of Normandy Way, north of Roston Drive. The proposed crossing at this location would be used by residents throughout the Hollycroft Grange development and those accessing the Triumph Motorcycles factory. The overall demand is therefore expected to be greater than suggested by Table 6.10.

6.7.9 If it is assumed that 50% of pedestrian and cycle trips generated within Hollycroft Grange as a whole would cross Normandy Way to reach Roston Drive, the demand for use of the proposed crossing can be estimated as set out in **Table 6.11**.

Table 6.11: Demand at Proposed Crossing North of Roston Drive

DEMAND ELEMENT	AM Peak Hour*	PM Peak Hour*
Existing crossing demand (as surveyed in 2022)	3	9
FPA pedestrian + cycle demand (from Table 6.10)	15	17
Factor to expand to full Hollycroft Grange level (1003 / 153 dwellings)	6.56	6.56
Total Hollycroft Grange pedestrian demand	98	112
Proportion assumed to use new crossing	50%	50%
TOTAL DEMAND (including existing)	49	56

** All totals have been rounded to nearest 1 movement. AM = 08:00-09:00. PM = 17:00-18:00.*

- 6.7.10 The capacity assessment of the Normandy Way/Roston Drive roundabout takes account of the proposed pedestrian crossing based on these approximate demands (assessed crossing movements are slightly higher due to capacity assessment being based on 180 additional dwellings).

7.0 TRAFFIC FORECASTS

7.1 Overview

- 7.1.1 This section of the TA summarises the traffic forecasts for the future year "*No Development*" and "*With Development*" scenarios and the impact of the scheme. It confirms the locations where material traffic increases would occur, therefore requiring further detailed assessment.

7.2 Assessment Years

- 7.2.1 The FPA is to be submitted in early 2023. If planning permission is granted within a reasonable time period, the scheme could commence during 2024. At a completion rate of around 50 dwellings per year, the scheme would be completed and fully occupied by late 2028 or early 2029.
- 7.2.2 The original TA presented capacity assessments at an assessment year of 2026, which was 10 years after the base year. Following a similar approach, capacity assessments would be undertaken 10 years after the target planning application submission year, i.e. at an assessment year of 2033.
- 7.2.3 However, assessment years for this TA have been selected to coincide with those agreed for assessments of further development on land west of Hollycroft Grange, which will be the subject of a future Outline Planning Application (OPA). Assessments for the OPA would be undertaken at a later stage using LCC's Pan Regional Transport Model (PRTM). The nearest available PRTM assessment years are 2031 and 2036.
- 7.2.4 In terms of the Strategic Road Network (SRN), NH's usual assessment requirements are set out in *DfT Circular 02/2013*. Paragraph 25 of the Circular states that:
- The overall forecast demand should be compared to the ability of the existing network to accommodate traffic over a period up to ten years after the date of registration of a planning application or the end of the relevant Local Plan whichever is the greater. This is known as the review period.*
- 7.2.5 In this case, it has been agreed with NH that the end of the review periods shall be 2036, which is more than 10 years after the FPA submission date and therefore robust. The 2036 PRTM assessments will compare: a *No Development* scenario that includes neither the FPA nor the OPA; and a *With Development* scenario that includes both.

- 7.2.6 This TA has been prepared as a stand-alone document to assess the impact of the FPA scheme in isolation and identify the infrastructure required to accommodate it, should the larger OPA scheme not proceed. To provide a robust assessment, a single assessment year of 2036 has been adopted for this TA.

7.3 Traffic Growth

- 7.3.1 Growth in background traffic to assessment year levels has been assessed using the TEMPRO 7.2c system and datasets. In accordance with current DfT guidance, the TEMPRO growth forecasts are based on the 2018 Road Traffic Forecasts (RTF) "Scenario 1" central assumptions with respect to economic growth and fuel costs.
- 7.3.2 Traffic growth factors for the "car driver" travel mode (all road types) have been obtained in accordance with the above approach. The TEMPRO 7.2 traffic growth factor calculations are presented in **Appendix J**.
- 7.3.3 Although version 8.0 of TEMPRO has now been released, its datasets were not in use for the purpose of calculating traffic growth factors when this TA was prepared.
- 7.3.4 Traffic growth factors have been identified for the County of Leicestershire, the HBBC planning authority area and the Hinckley 011 MSOA (as used for the trip distribution model). The resulting traffic growth factors are compared in **Table 7.1**.

Table 7.1: Background Traffic Growth Factors

Area	Peak Period	NTM Growth Factors 2022 to 2036
Leicestershire County	AM	1.116
	PM	1.116
HBBC Area	AM	1.110
	PM	1.110
Hinckley 011 MSOA	AM	1.108
	PM	1.104

- 7.3.5 The growth factors at County, Borough and MSOA level are similar. However, as the study area includes roads within the wider HBBC area beyond the local MSOA, the Borough-level growth factors are considered appropriate and have been applied as follows:
- AM Peak growth Factor: 11.0%
 - PM Peak growth Factor: 11.0%

- 7.3.6 No alternative assumption adjustments to the TEMPRO trip end data have been made to account for any of the currently planned developments in the area. This is likely to result in an element of double counting of traffic growth effects but will provide a robust assessment.

7.4 Committed Development

- 7.4.1 Committed developments are defined as those having a valid planning consent but unimplemented or incomplete. Committed development traffic is only taken into account where it is not represented within the traffic surveys and could materially affect future traffic patterns within the study area over and above background traffic growth effects.
- 7.4.2 A list of committed developments to be considered by this TA was requested from HBBC, LCC and NH. At the time of preparing this report, confirmation of the committed developments to be included had not been received.
- 7.4.3 A review of recent planning applications in the area was therefore undertaken. A planning application for a major development on land to the north of the A47 and east of Stoke Road, relatively close to Hollycroft Grange, is currently under consideration (HBBC planning application reference: 22/00318/OUT). The TA that supported this planning application (Hub Transport Planning Ltd., March 2022) considered the following committed developments:
- Barwell SUE (2,140 dwellings)
 - Earl Shilton SUE (1,355 dwellings)
 - Hollycroft Grange development (850 dwellings – Parcel 1 area)
- 7.4.4 It should be noted that the Barwell and Earl Shilton SUEs are allocated for development but neither benefit from planning permission.
- 7.4.5 Traffic flow information relating to these schemes was obtained via the original 2015 TA (NTP) that supported the approved Parcel 1 development. To estimate committed development traffic flows (excluding the Parcel 1 scheme), NTP's total traffic flows for the 2016 baseline scenario were subtracted from those for the 2026 "With Committed Development" scenarios.
- 7.4.6 The resulting set of flows include the traffic flow effects associated with the Barwell and Earl Shilton SUEs, but also include background traffic growth between 2016 and

2026 thus introducing an element of double-counting of traffic flow increases. Overall, the approach adopted is considered highly robust.

- 7.4.7 The traffic flow forecasts as extracted from the 2015 TA are provided in **Appendix K**. The assignment of committed development traffic to the highway network is presented in the traffic flow diagrams at **Appendix L**. These diagrams show some negative traffic flows, which are understood to relate to the reassignment of trips predicted using the original transport model at that time.

7.5 Assessment Scenarios

- 7.5.1 Four assessment scenarios have been considered to identify the impacts of the proposed development. These are:
- **DN:** 2022 Do Nothing Scenario - network traffic flows as surveyed, for use in validation of the junction capacity models.
 - **DM1:** 2036 Do Minimum Scenario - including committed development traffic and approved Hollycroft Grange traffic (850 dwellings).
 - **DS1:** 2036 Do Something Scenario - including committed development traffic and a total development at Hollycroft Grange traffic of 1,030 dwellings plus the new access from Roston Drive.
 - **DS2:** Sensitivity Test - same as DS1 but based on the updated 2022 trip generation rates as applied to a total development at Hollycroft Grange traffic of 1,003 dwellings.
- 7.5.2 The traffic flow assignment diagrams associated with each scenario are presented in **Appendix L**.
- 7.5.3 The DS1 scenario considers a slightly higher total development at Hollycroft Grange than is now proposed (1,030 dwellings instead of 1,003) and is therefore pessimistic. It has, however, been adopted for the capacity assessments of the main junctions of Normandy Way with Greenfinch Road, Outlands Drive and Roston Drive, which can be regarded as a highly robust.

7.6 Assessment of Traffic Impact

- 7.6.1 To assess where material traffic flow increases would occur within the study area, the advice provided within the former DfT *"Guidance on Transportation Assessment"* has

been followed to provide an indication of the development's area of influence. Although this DfT guidance is no longer current, no replacement criteria for the assessment of material traffic flow increases have been made available and the advice is still considered relevant.

- 7.6.2 The former DfT guidelines provide no specific thresholds and do not advocate the use of percentage thresholds alone to determine where there is a material increase in traffic flow. However, they suggest that a two-way increase in traffic flow of more than 30 vehicles may require further consideration or more detailed assessment.
- 7.6.3 This threshold has been used to provide an initial list of junctions that require further consideration. The need for detailed assessment of each within the TA is then reviewed below.
- 7.6.4 The development of Parcel 2 would result in a net increase of 153 dwellings above the currently approved level. The forecast additional peak hour development traffic flows into key junctions are summarised in **Table 7.2**. Locations where the figure exceeds 30 vehicles are highlighted (N.B - junction numbering system below is different to that used for the traffic survey locations in Section 3).

Table 7.2: Development Traffic Flows Into Key Junctions – FPA Scheme

JUNCTION		AM (Vehicles)	PM (Vehicles)
A1	NORMANDY WAY/GREENFINCH ROAD	20	23
J1	NORMANDY WAY/OUTLANDS DRIVE	6	7
J2	NORMANDY WAY/ROSTON DRIVE	68	77
J3	A5/A47 DODWELL'S ROUNDABOUT	49	56
J4	A5/A47 THE LONG SHOOT SIGNALS	21	24
J5	M69 JUNCTION 1	24	28
J6	A47/WYKIN ROAD ROUNDABOUT	18	21
J7	A47/STOKE ROAD ROUNDABOUT	15	18
J8	A47/A447 JUNCTION	15	17
J9	A47/LEICESTER ROAD JUNCTION, EARL SHILTON	12	14

- 7.6.5 Development traffic flows are forecast to be above 30 vehicles at the A5/A47 Dodwell's Roundabout. However, the forecast increases of around 50 vehicles would be modest relative to existing traffic flows and are unlikely to give rise to significant traffic impacts in practice, being equivalent to less than 1 additional vehicle per minute on average.
- 7.6.6 The FPA development would not have significant impacts on the A47 corridor within Warwickshire.

- 7.6.7 In Leicestershire, the most significant impacts are likely to occur on the A47 Normandy Way and at its junction with Roston Drive. Traffic impacts at the Greenfinch Road, Outlands Drive and Roston Drive junctions are considered in Section 8 of the TA.
- 7.6.8 Additional development traffic flows on the Outlands Drive and Roston Drive routes towards central Hinckley would be below 20 vehicles and are not expected to have significant impacts. Traffic flow increases on these local routes would in practice be shifted to other modes where possible through improved access from the development to the bus and rail networks and further enhancements to pedestrian and cycle infrastructure.

8.0 CAPACITY ASSESSMENTS

8.1 Overview

8.1.1 This section of the TA provides a summary of the capacity assessments undertaken at the study area junctions that would be subject to significant increases in traffic flow, as identified in Section 7. These are as follows:

- A1: A47 Normandy Way/Greenfinch Road Roundabout
- J1: A47 Normandy Way/Outlands Drive
- J2: A47 Normandy Way/Roston Drive

8.1.2 A capacity assessment of the altered T-junction arrangement that will provide access to Triumph Motorcycles access has also been undertaken.

8.1.3 At this stage, Junction 3 (A5/A47 Dodwell's Roundabout) has not been subjected to detailed capacity assessments, as the FPA scheme in isolation is not expected to give rise to significant traffic flow increases at that location (see Section 7).

8.2 Methodology

8.2.1 The capacity of the junctions listed above has been assessed using TRL Software's JUNCTIONS 10 modelling suite. JUNCTIONS 10 model outputs include Ratio of Flow to Capacity (RFC) values, which provide an indication of how close to capacity each junction entry will operate. An RFC value of less than or equal to 1.00 indicates that the entry is operating within capacity. The desirable maximum RFC value for new junctions at the appropriate design year is 0.85, allowing some reserve capacity for daily fluctuations in traffic demand.

8.2.2 JUNCTIONS 10 results for priority junctions are quoted by traffic stream. The software does not provide results for "free-flow" streams that are not delayed (e.g. - straight ahead major road movement where it is not blocked by vehicles waiting to turn right into the side road), which are therefore marked within the summary table as "-". Each arm of a priority junction is identified by a letter and each stream is thus defined by an origin-destination pairing (e.g. C-AB is any movement from Arm C to either Arm A or Arm B).

8.2.3 All modelled queues are quoted in Passenger Car Units (PCUs). For the purposes of conversion into queue lengths, a single PCU can be considered to have a length of 5.75 metres.

8.3 PCU Conversion

8.3.1 For all capacity assessments, traffic flows have been input as PCUs. Surveyed traffic flows in vehicles were converted into PCUs using standard factors provided in the DfT's WebTAG M3.1 guidance.

8.3.2 A rolling total of PCU traffic flows into all arms of the 3 main study area junctions (excluding Dodwell's Roundabout) was then produced to determine the times of the AM and PM peak hours across the local network as a whole. This analysis is illustrated in **Figure 8.1** below.

Figure 8.1: Identification of Network Peak Hours

	ROSTON	GREENFINCH	OUTLANDS	DODWELLS			
AM	All arms	All arms	All arms	All arms	Total		
07:30 to 08:30	1887.4	852	1554.6	3746.6	4294		
07:45 to 08:45	1816.2	873.8	1607.6	3755.8	4297.6	PEAK HOUR	
08:00 to 09:00	1736.4	845.2	1578.6	3694	4160.2		
08:15 to 09:15	1646.8	836.4	1529.6	3569.6	4012.8		
08:30 to 09:30	1496	789.8	1415	3338.6	3700.8		
	ROSTON	GREENFINCH	OUTLANDS	DODWELLS			
PM	All arms	All arms	All arms	All arms	Total		
16:30 to 17:30	1948.2	830.6	1727.2	3650	2778.8	PEAK HOUR	
16:45 to 17:45	1842.8	784.8	1706.8	3690.6	2627.6		
17:00 to 18:00	1783	744.2	1632.6	3586.4	2527.2		
17:15 to 18:15	1613	677.8	1498.6	3428.2	2290.8		
17:30 to 18:30	1521.2	626.8	1381.4	3177.6	2148		

8.3.3 The weekday peak hours have therefore been identified as:

- AM Peak Hour: 07:45 to 08:45
- PM Peak Hour: 16:30 to 17:30

8.4 Model Validation

8.4.1 To ensure the JUNCTIONS 10 models provide reasonable representations of future traffic conditions, a model validation exercise was undertaken, whereby the modelled queue lengths for the DN (2022) scenario were compared with observed queues recorded by the traffic surveys.

8.4.2 A summary of the findings and a discussion of the need for any model adjustments is presented in **Table 8.1**.

Table 8.1: Summary of Model Validation Exercise

Junction Number and Name	Comment
A1: A47/Greenfinch Road	Surveyed mean maximum queues generally 0 or 1 PCU up to a maximum of 2 PCUs. The JUNCTIONS 10 model predicts mean maximum queues of between 0 and 0.5 PCUs. It should be noted that the modelled queues are averaged over the full hour period, whereas the surveyed queues are the longest recorded in each 15-minute period. The differences between modelled and observed queues are not significant and the model is therefore considered reasonably representative of the junction's on-street operation. No model adjustments are considered necessary.
J1: A47/Outlands Drive	Surveyed mean maximum queues generally 1 to 2 PCUs. The JUNCTIONS 10 model predicts mean maximum queues of between 0 and 0.5 PCUs. It should be noted that the modelled queues are averaged over the full hour period, whereas the surveyed queues are the longest recorded in each 15-minute period. The differences between modelled and observed queues are not significant and the model is therefore considered reasonably representative of the junction's on-street operation. No model adjustments are considered necessary.
J2: A47/Roston Drive	Surveyed mean maximum queues during the AM peak hour between 0 and 4 PCUs per entry lane, except at Normandy Way (north) Lane 1 (8 PCUs). The average queue across both Normandy Way (north) lanes is 4 PCUs. During the PM peak hour mean maximum queues between 0 and 4 PCUs on most arms, except on Normandy Way (north) Lane 1 (5 PCUs) and Dodwell's Road (south) Lane 1 (6 PCUs). The average queue across both lanes is below 3 PCUs at both entries. The JUNCTIONS 10 model predicts mean maximum queues of between 0 and 1.5 PCUs. It should be noted that the modelled queues are averaged over the full hour period, whereas the surveyed queues are the longest recorded in each 15-minute period. The differences between modelled and observed queues are not significant and the model is therefore considered reasonably representative of the junction's on-street operation. No model adjustments are considered necessary.

8.4.3 A copy of the junction layouts including key geometric measurements as input to the models is presented in **Appendix M**. The junction model outputs are presented in **Appendix N**.

8.4.4 It should be noted that the Normandy Way/Outlands Drive junction is to be modified by a scheme of S278 works associated with the currently approved Hollycroft Grange development. These works are as shown within the background of Drawing C21021/DR002 and comprise modifications to the existing ghost-island right turn lane on Normandy Way, including a give-way line that give priority to traffic turning right from Outlands Drive. Whilst these modifications can be expected to improve the capacity of the right turn from Outlands Drive, this situation is difficult to model accurately and the improvement has therefore not been taken into account. The results can therefore be regarded as a worst-case scenario in terms of the Outlands Drive arm of the junction.

8.5 Capacity Analysis

8.5.1 Further to the validation exercise, the JUNCTION 10 models have been used to assess the DM1 (2036 "No Development") and DS1 (2036 "With Development") scenarios. By comparing the results of these scenarios, it is possible to determine whether the proposed development and associated access arrangements would create a material impact on the operation of each junction.

8.5.2 A summary of the model results is presented in **Table 8.2**. Entries operating beyond the design capacity threshold (maximum RFC = 0.85) are highlighted in yellow. Where the DS1 scenario would result in further deterioration on junction arms already operating beyond this threshold, these impacts are highlighted in red text.

8.5.3 It should be noted once again that the DS1 scenario is based on the slightly higher levels of traffic generated by 180 additional dwellings, rather 153 dwellings as now proposed. These results are therefore robust.

Table 8.2: Junction Analysis Results Summary

Arm	AM Peak				PM Peak			
	DM1 Scenario		DS1 Scenario		DM1 Scenario		DS1 Scenario	
	Capacity	Q (pcu)	Capacity	Q (pcu)	Capacity	Q (pcu)	Capacity	Q (pcu)
Junction A1: A47/Greenfinch Road Roundabout								
(A) Greenfinch Road	0.23	0.3	0.09	0.1	0.15	0.2	0.06	0.1
(B) A47 (North)	0.42	0.8	0.39	0.7	0.37	0.7	0.37	0.6
(C) A47 (South)	0.25	0.4	0.25	0.4	0.48	1.0	0.40	0.7
Junction T1: Roston Drive/Triumph Motorcycles Priority Junction								
(A) Roston Drive (East)	N/A		Not Opposed		N/A		Not Opposed	
(B) Triumph Motorcycles			0.05	0.1			0.38	0.7
(C) Roston Drive (West)			0.00	0.0			0.00	0.0
Junction 1: A47/Outlands Drive Priority Junction								
Outlands Drive (Left)	0.20	0.3	0.18	0.2	1.06	3.1	0.14	0.2
Outlands Drive (Right)	0.52	1.1	0.35	0.6	0.94	4.6	0.50	1.0
A47 Northbound (Right)	0.05	0.1	0.10	0.1	0.12	0.1	0.14	0.2
Junction 2: A47/Roston Drive Roundabout Junction								
(A) Roston Drive (West)	0.02	0.0	0.30	0.5	0.24	0.3	0.43	0.8
(B) A47 (North)	0.69	2.5	0.67	2.2	0.58	1.5	0.61	1.7
(C) Roston Drive (East)	0.43	0.8	0.46	0.9	0.34	0.6	0.37	0.6
(D) A47 (South)	0.36	0.6	0.37	0.6	0.68	2.3	0.74	3.1

8.5.4 **Table 8.2** shows that all junctions except Junction 1 (A47/Outlands Drive) are forecast to operate within capacity under both the DM1 and DS1 scenarios.

8.5.5 The proposed Triumph Motorcycles access is forecast to operate well within capacity, with minimal levels of queuing.

8.5.6 The operation of the Normandy Way/Greenfinch Road roundabout is forecast to improve slightly when compared to the DM1 scenario. This is because the second access at Roston Drive would enable development traffic from other parts of Hollycroft Grange travelling south to re-route, removing a proportion of traffic from Greenfinch Road.

8.5.7 The Outlands Drive junction would operate with a maximum RFC value of more than 1.0 during the PM peak hour in the DM1 scenario and is therefore already operating above capacity. However, the proposed second access from Roston Drive would improve the distribution of traffic on Normandy Way such that the Outlands Drive junction would then operate within capacity. The scheme would therefore result in

improved operation of this junction, to the overall benefit of highway capacity and safety.

- 8.5.8 The A47/Roston Drive junction would be subject to additional traffic flows due to the additional development and the re-routing of other Hollycroft Grange traffic via the extended Spine Road. However, the junction would continue to operate well within capacity. The inclusion of the signal-controlled crossing on the northern arm of the junction (Normandy Way) would have only a modest impact on the junction's operation.
- 8.5.9 Given the above findings, no physical mitigation works to off-site junctions are considered necessary to accommodate the FPA scheme, beyond those already consented or implemented in conjunction with the approved development.

9.0 SUMMARY AND CONCLUSIONS

9.1 Summary

- 9.1.1 This report provides a Transport Assessment (TA) in support of a Full Planning Application (FPA) for further development by Bloor Homes of land to the west of Normandy Way, Hinckley. The site lies within the Hinckley and Bosworth Borough Council (HBBC) local authority area.
- 9.1.2 The FPA scheme would provide an extension of the current *Hollycroft Grange* development, which is now being implemented in accordance with an outline planning consent for 850 dwellings and other complementary land uses, including a new primary school (*HBBC Planning Ref:15/00188/OUT*). The FPA would provide a further 153 dwellings to the south-east and an extension of the current Spine Road to connect with a second vehicle access at the Normandy Way/Roston Drive roundabout.
- 9.1.3 The FPA would therefore increase the total number of dwellings provided at Hollycroft Grange from 850 to 1,003; all of which would benefit from the additional access to Normandy Way.
- 9.1.4 It is considered that the conventional assessments presented in this TA are sufficient to demonstrate the acceptability of the FPA development and its proposed access arrangements.
- 9.1.5 The TA has been prepared following extensive discussions with the affected highway authorities:
- Leicestershire County Council (LCC);
 - Warwickshire County Council (WCC);
 - National Highways (NH).
- 9.1.6 The TA presents the strategy for access to the development by vehicles, pedestrians, cyclists and public transport users. It also presents highway capacity assessments and preliminary design drawings of the site access arrangements.
- 9.1.7 Dwellings within the proposed development area would be within a comfortable walking distance of a new local bus services that will pass through Hollycroft Grange and is secured by a current planning condition. The scheme is also within a

comfortable walking distance of shops, schools, recreation facilities and employment opportunities. Hinckley town centre, the bus hub and railway station are located some 2km east of the site and could be reached satisfactorily on foot.

- 9.1.8 The development would also be within a comfortable cycling distance of local amenities and the major employment areas in surrounding urban area. Access to these areas will be enhanced as a result of proposed new crossing facilities on Normandy Way (see below).
- 9.1.9 Records of personal injury collisions show no evidence of any road-safety related-issues on the highway network immediately adjacent to the site.
- 9.1.10 Traffic surveys has been undertaken to establish base-line traffic flows and pedestrian/cyclist movements in the vicinity of the development. These show that whilst traffic flows on Normandy Way are significant, queues at the major junctions with Greenfinch Road, Roston Drive and Outlands Drive are generally modest.
- 9.1.11 The TA uses the traffic survey data to examine the traffic impacts arising from the FPA scheme. This assessment is based on trip generation rates for the approved development and a trip distribution model prepared using National Census travel-to-work data. This is considered to be a highly robust approach, as the previously approved trip rates date back to 2015 and are higher than a set of alternative trip rates obtained from the current version of the TRICS database.
- 9.1.12 Notwithstanding this, the traffic impact of the additional 153 dwellings to be provided by the FPA would not be significant. The provision of the second access would also improve the distribution of Hollycroft Grange traffic within the site, increasing turning movements at the Normandy Way/Roston Drive roundabout whilst reducing traffic demands at the current Normandy Way/Greenfinch Road site access.
- 9.1.13 The extended Spine road would be provided to current LCC Highways Design Guide standards appropriate to a bus route (6.75m carriageway width). Vehicle swept path analysis has been undertaken to demonstrate that buses and refuse collection vehicles can be satisfactorily accommodated.
- 9.1.14 The extended Spine Road would be designed to limit vehicle speeds to 20mph, in accordance with current guidance. It would have 2.0m wide footways to each side, consistent with the current level of provision throughout Hollycroft Grange. The extended Spine Road would include a new priority T-junction access to the Triumph Motorcycles site.

9.1.15 The TA has considered the capacity of the following junctions at an agreed assessment year of 2036:

- Normandy Way/Greenfinch Road roundabout (existing);
- Normandy Way/Roston Drive roundabout (modified);
- Roston Drive/Triumph Motorcycles access junction (proposed);
- Normandy Way/Outlands Drive junction (with committed improvements).

9.1.16 The capacity assessments are based on a higher number of additional dwellings than now proposed and are therefore robust. Nevertheless, the TA confirms that these junctions would operate within capacity at the 2036 assessment year and with the expanded Hollycroft Grange scheme in place. The operation of the Normandy Way/Outlands Drive junction would be improved as a result of providing the second access, due to the improved distribution of development traffic on Normandy Way.

9.1.17 Traffic flow increases resulting from the FPA scheme beyond these junctions are not forecast to be significant. The most sensitive location beyond the site is likely to be the A5/A47 Dodwell's roundabout to the south, which is also the first point of access to the Strategic Road Network (SRN). Based on the higher 2015 trip rates, an increase in two-way traffic demand of around 50 vehicles is forecast at this location. However, this is modest relative to existing traffic flows and unlikely to give rise to significant traffic impacts in practice.

9.1.18 Additional development traffic flows on the Outlands Drive and Roston Drive routes towards central Hinckley would not be significant and would in practice be reduced further through improved access from the whole of Hollycroft Grange to the bus and rail networks and further enhancements to pedestrian and cycle infrastructure.

9.1.19 Improved pedestrian and cycle crossing facilities are therefore proposed as follows:

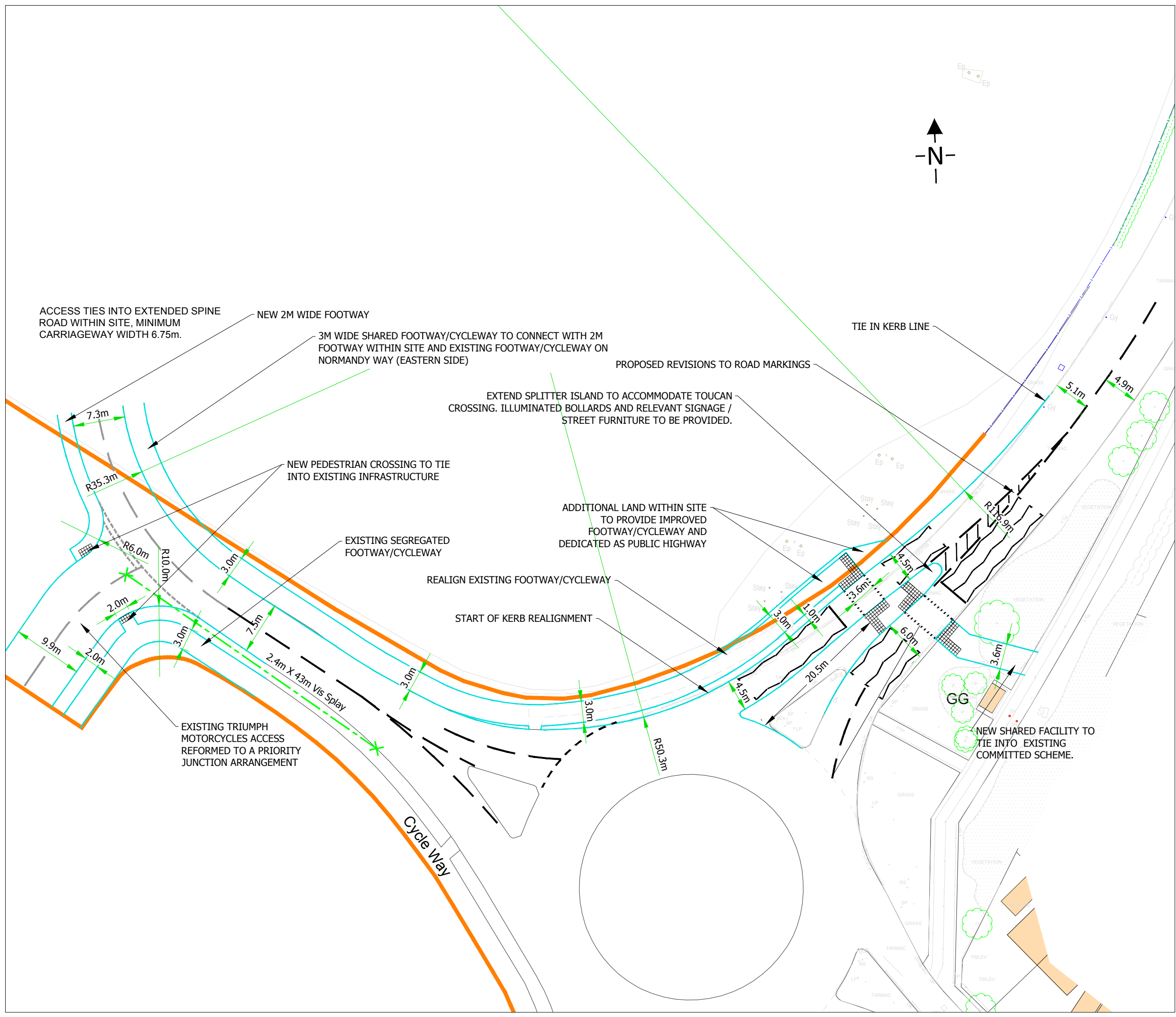
- New TOUCAN crossing of Normandy Way north of the Roston Drive roundabout;
- Uncontrolled crossing of Normandy Way north of Outlands Drive, connecting with a dedicated pedestrian/cycle link to the site.

9.1.20 Car parking provision within the FPA development would be consistent with that approved in respect of the current Hollycroft Grange scheme.

9.2 Conclusions

- 9.2.1 The proposed development complies with the requirements of the NPPF and other relevant local transport and development policies.
- 9.2.2 Satisfactorily vehicular access to the development can be achieved. The proposals would be subject to a Stage 1 Road Safety Audit (RSA).
- 9.2.3 The development would be within reach of a wide range of local facilities and would be accessible by sustainable travel modes.
- 9.2.4 The residual impact of the development on the local highway network would not be significant and it is therefore considered that the site is suitable for the scale and type of development proposed.
- 9.2.5 It is concluded that the proposed development could be satisfactorily accommodated by the adjacent transport network and that there are no significant transport issues that should prevent the planning application from being approved.

DRAWINGS



1. THIS DRAWING IS NOT TO BE SCALED FOR CONSTRUCTION PURPOSES.
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HIGHWAY BOUNDARY

REV	DESCRIPTION	DATE	BY	AUTH
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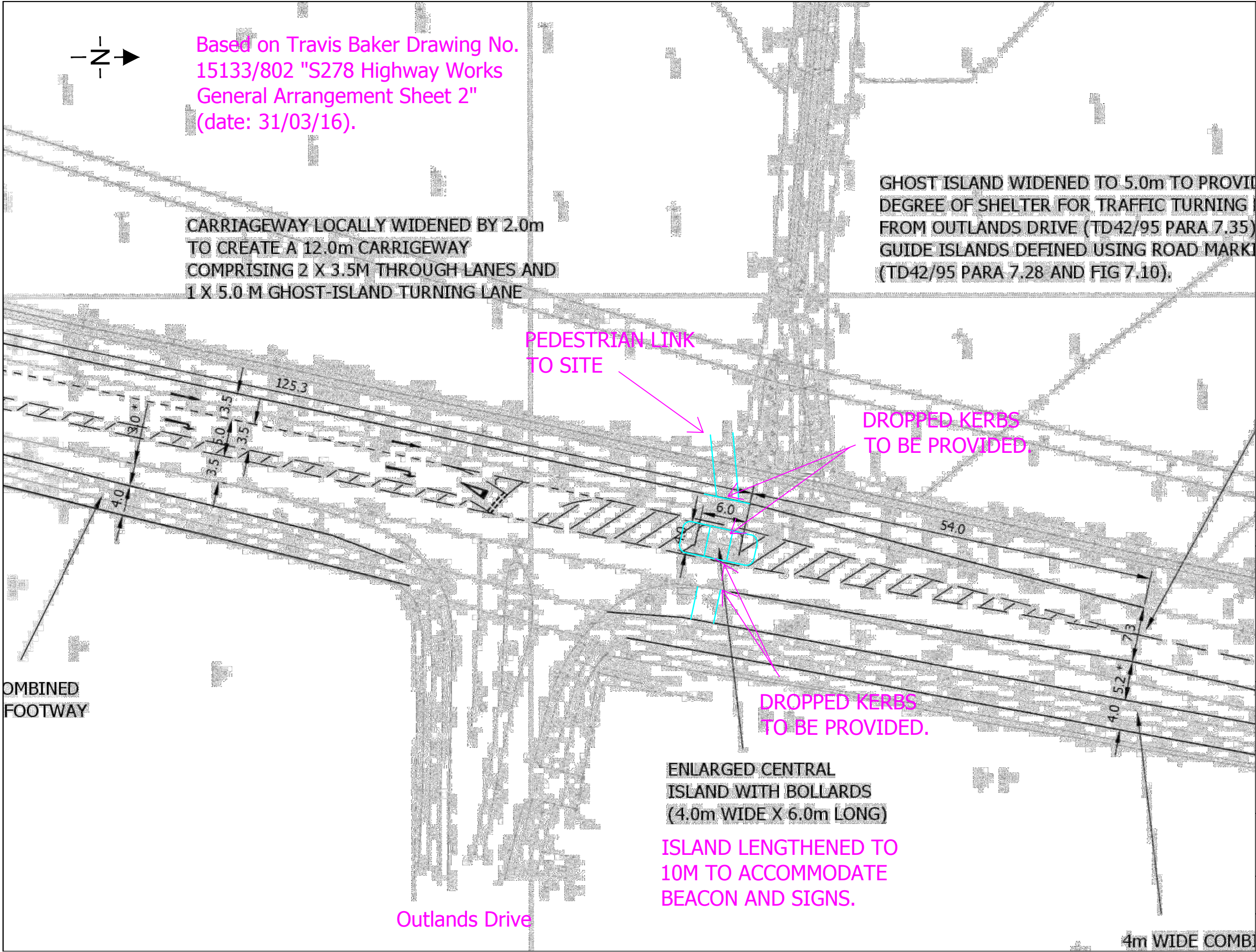
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BLOOR HOMES

PROJECT
NORMANDY WAY, HINCKLEY

TITLE
PROPOSED DEVELOPMENT ACCESS:
GENERAL ARRANGEMENT

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MC	SM	1:500	A3	14/11/22

PROJECT NO.	DRAWING NO.	REV
C21021	DR001	-



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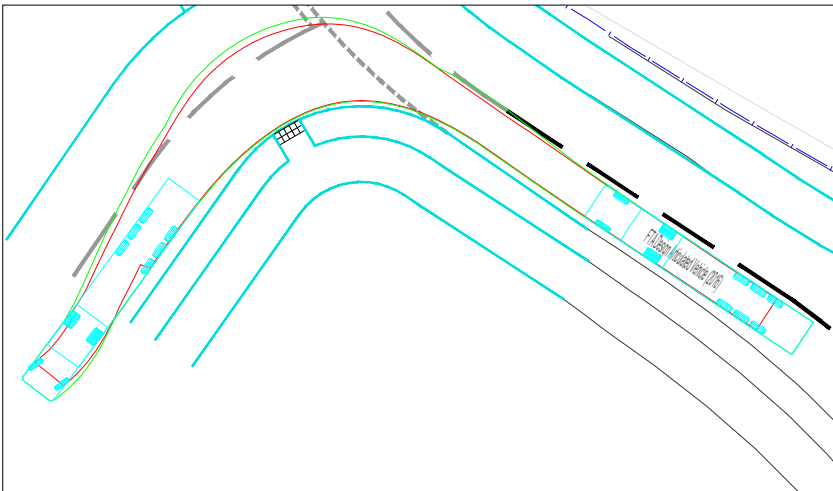
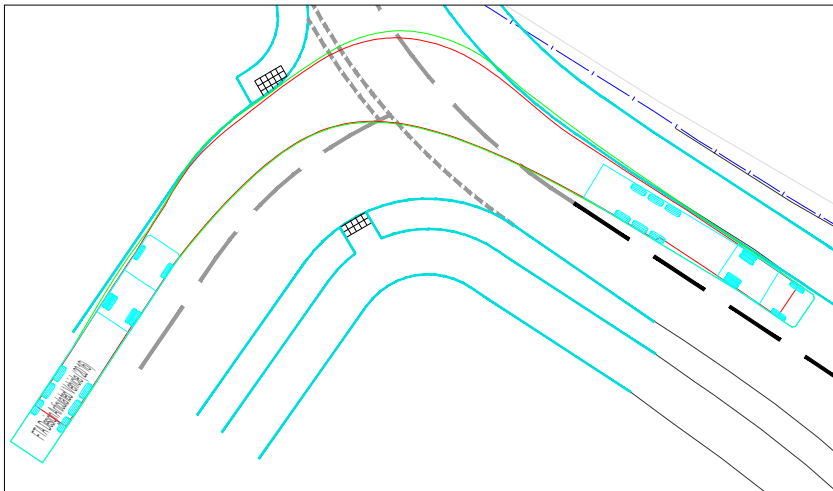
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PROJECT
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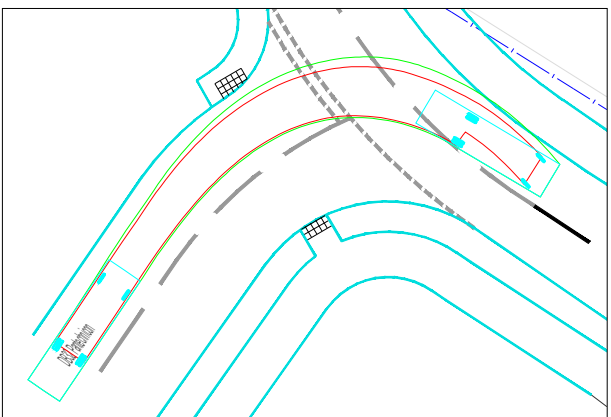
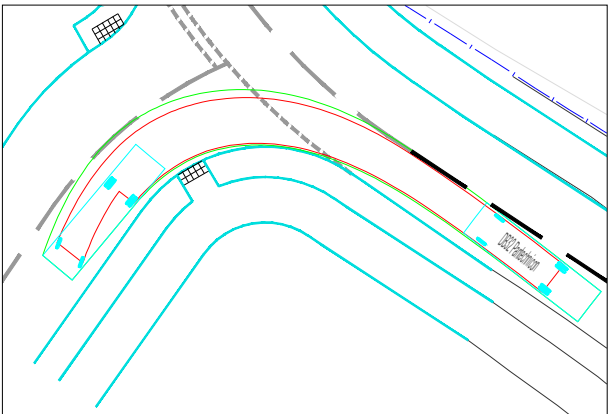
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CROSSING AT OUTLANDS DRIVE

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PROJECT NO. C21021		DRAWING NO. DR002		REV -

TRIUMPH MOTORCYCLES ACCESS
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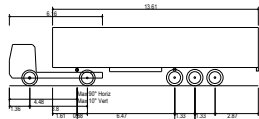


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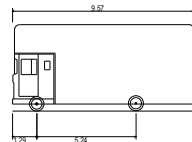


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VEHICLE PROFILES:



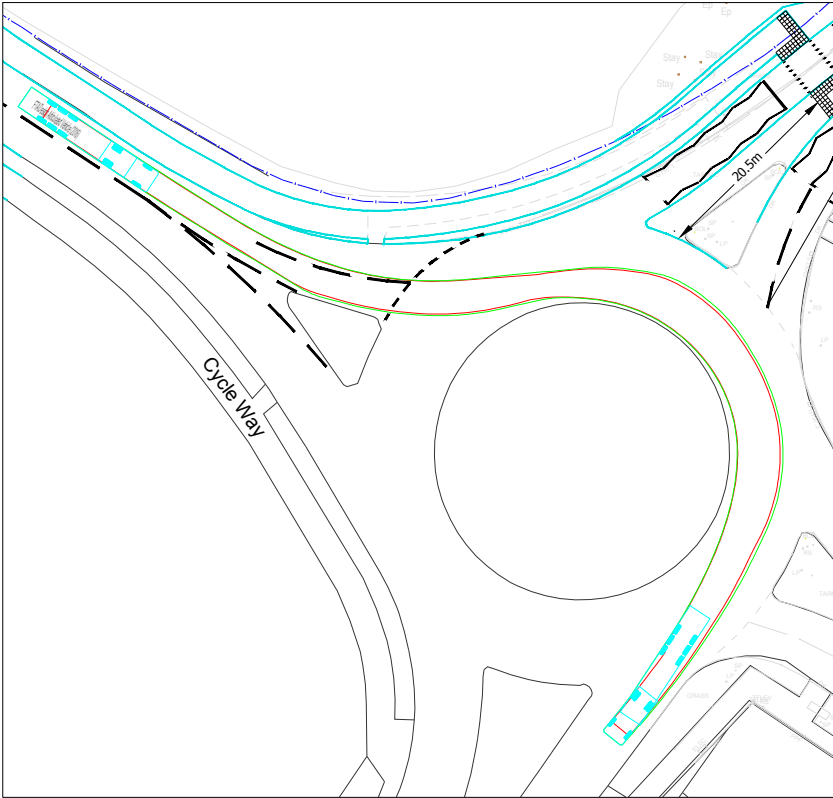
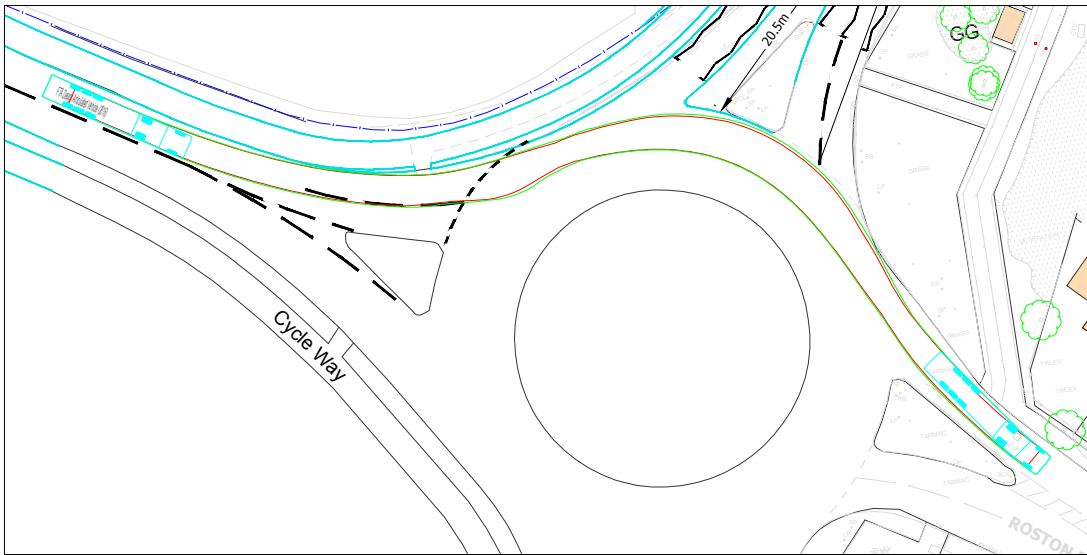
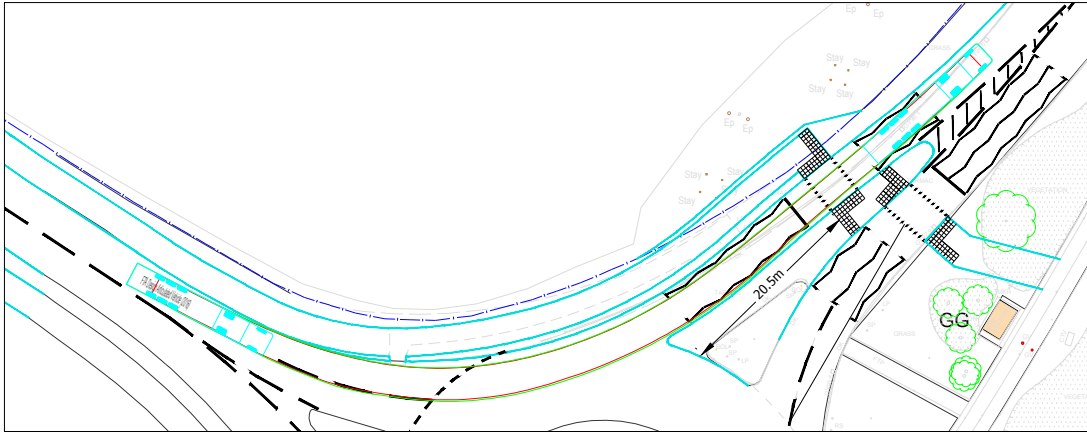
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Overall Body Height 3.870m
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Max Track Width 2.470m
Lock to lock time 3.00s
Kerb to Kerb Turning Radius 6.600m



DB32 Pantechicon
Overall Length 9.570m
Overall Width 2.520m
Overall Body Height 4.571m
Min Body Ground Clearance 0.363m
Max Track Width 2.300m
Lock to lock time 6.00s
Kerb to Kerb Turning Radius 10.450m

A47 / ROSTON DRIVE ROUNDABOUT

HGV TRACKING 1:500 @ A3



A	HGV Swept Path Analysis Added	19-12-22	MC	MC
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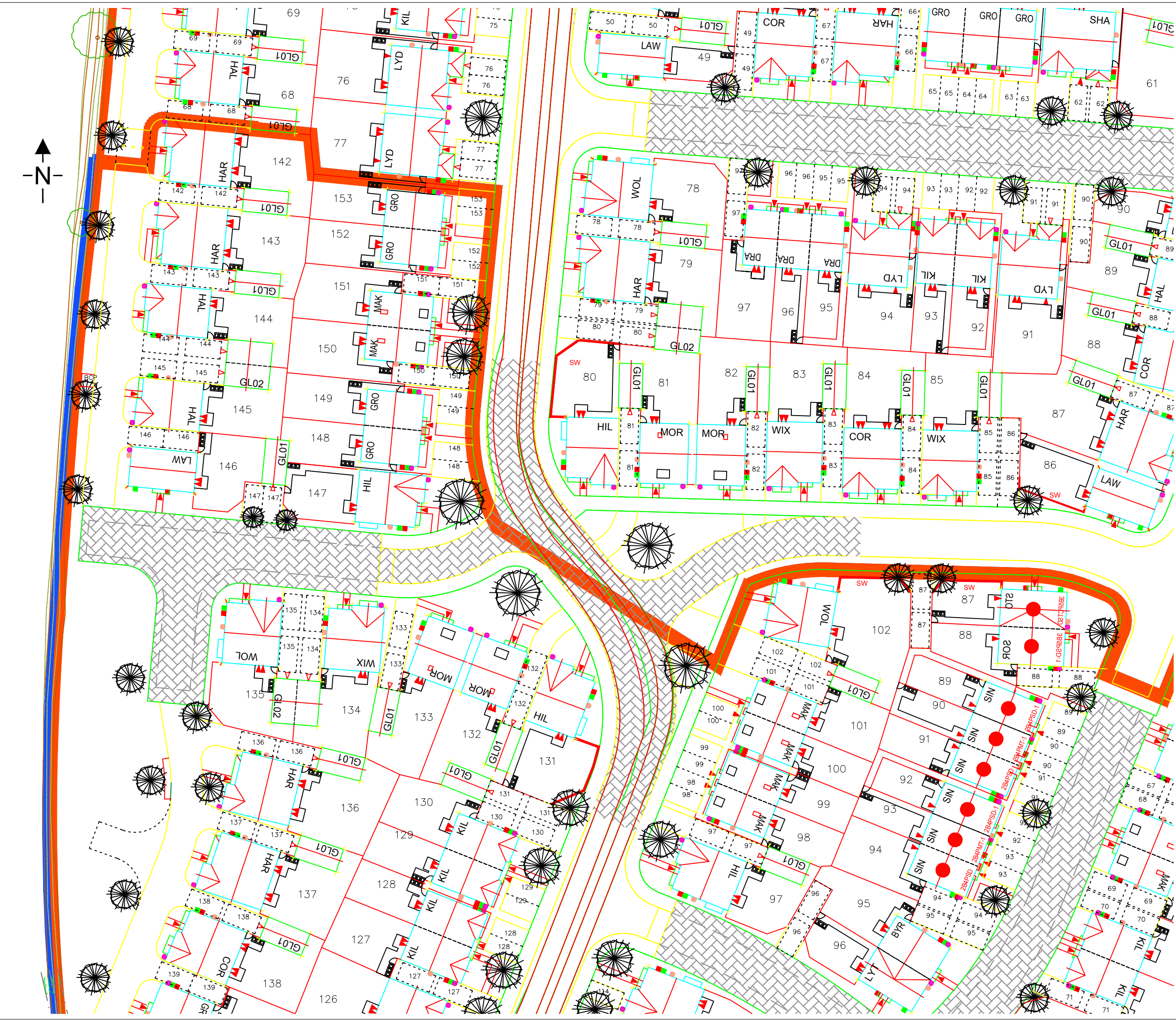
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BLOOR HOMES

PROJECT
NORMANDY WAY, HINCKLEY

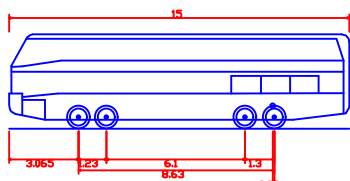
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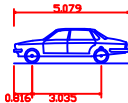
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15m 6WS Luxury Coach
Overall Length 15.000m
Overall Width 2.500m
Overall Body Height 4.157m
Min Body Ground Clearance 0.397m
Track Width 2.500m
Lock to lock time 3.00s
Wall to Wall Turning Radius 12.490m



Large Car (2006)
Overall Length 5.079m
Overall Width 1.872m
Overall Body Height 1.525m
Min Body Ground Clearance 0.310m
Track Width 1.831m
Lock to lock time 4.00s
Kerb to Kerb Turning Radius 5.900m

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REV	DESCRIPTION	DATE	BY	AUTH

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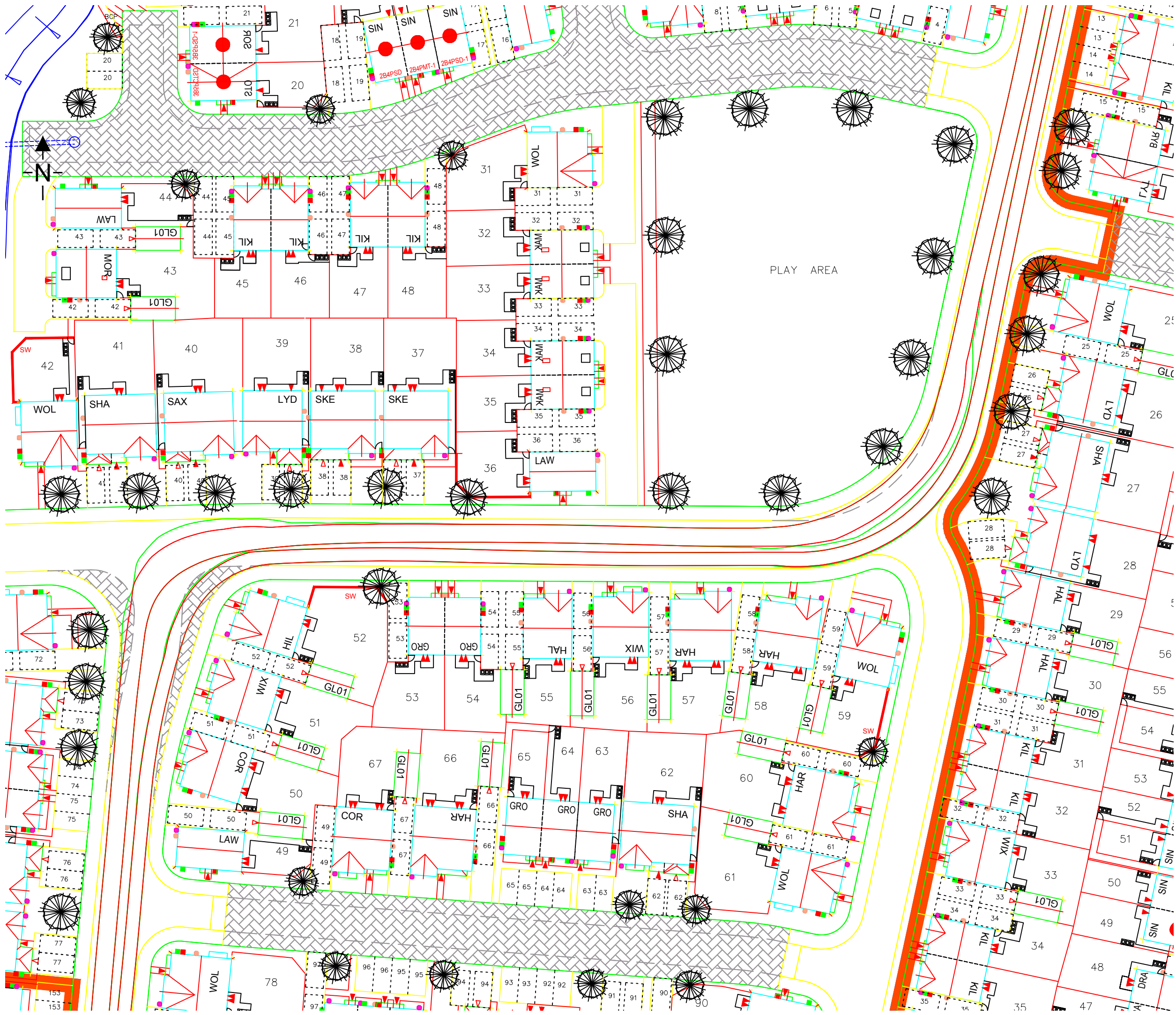
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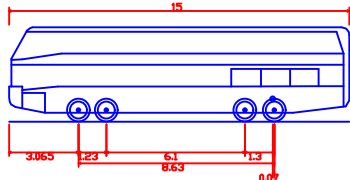
PROJECT
NORMANDY WAY, HINCKLEY

TITLE
INTERNAL ROAD VEHICLE TRACKING: BUS INBOUND (2 OF 4)

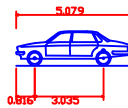
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PROJECT NO. C21021		DRAWING NO. DR005		REV A



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15m 6WS Luxury Coach
Overall Length 15.000m
Overall Width 2.500m
Overall Body Height 4.157m
Min Body Ground Clearance 0.397m
Track Width 2.500m
Lock to lock time 5.00s
Wall to Wall Turning Radius 12.490m



Large Car (2006)
Overall Length 5.079m
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Overall Body Height 1.525m
Min Body Ground Clearance 0.310m
Max Track Width 1.831m
Lock to lock time 4.00s
Kerb to Kerb Turning Radius 5.900m

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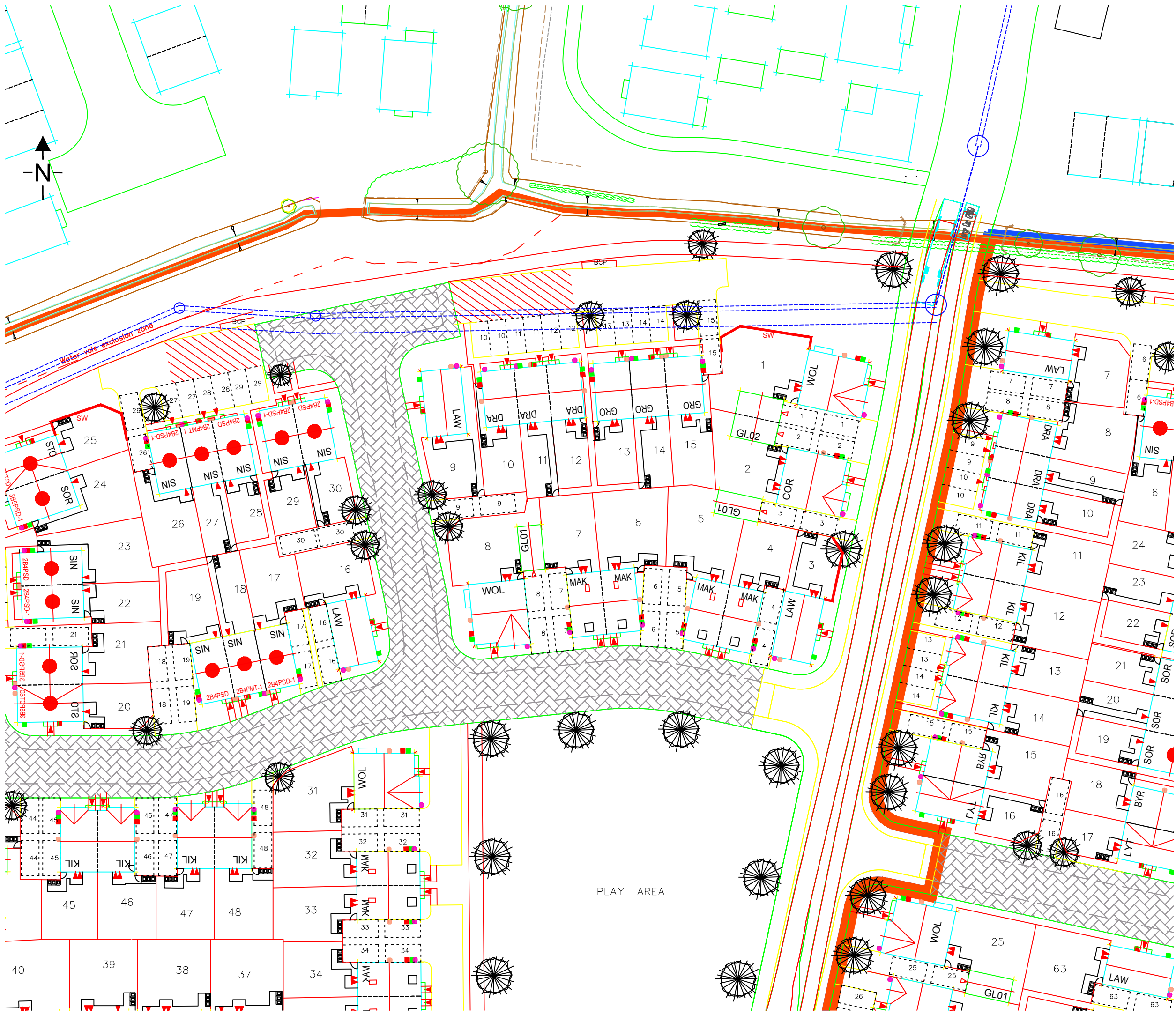
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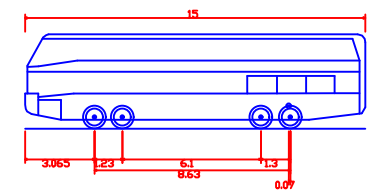
PROJECT
NORMANDY WAY, HINCKLEY

TITLE
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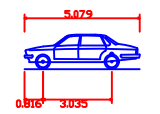
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PROJECT NO. C21021		DRAWING NO. DR006		REV A



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15m 6WS Luxury Coach
Overall Length 15.000m
Overall Width 2.500m
Overall Body Height 4.157m
Min Body Ground Clearance 0.397m
Track Width 2.500m
Lock to lock time 4.00s
Wall to Wall Turning Radius 12.490m



Large Car (2006)
Overall Length 5.079m
Overall Width 1.872m
Overall Body Height 1.525m
Min Body Ground Clearance 0.310m
Max Track Width 1.831m
Lock to lock time 4.00s
Kerb to Kerb Turning Radius 5.900m

A	UPDATED TO SITE LAYOUT No: 009 REV B	09.05.23	SM	SAM
REV	DESCRIPTION	DATE	BY	AUTH

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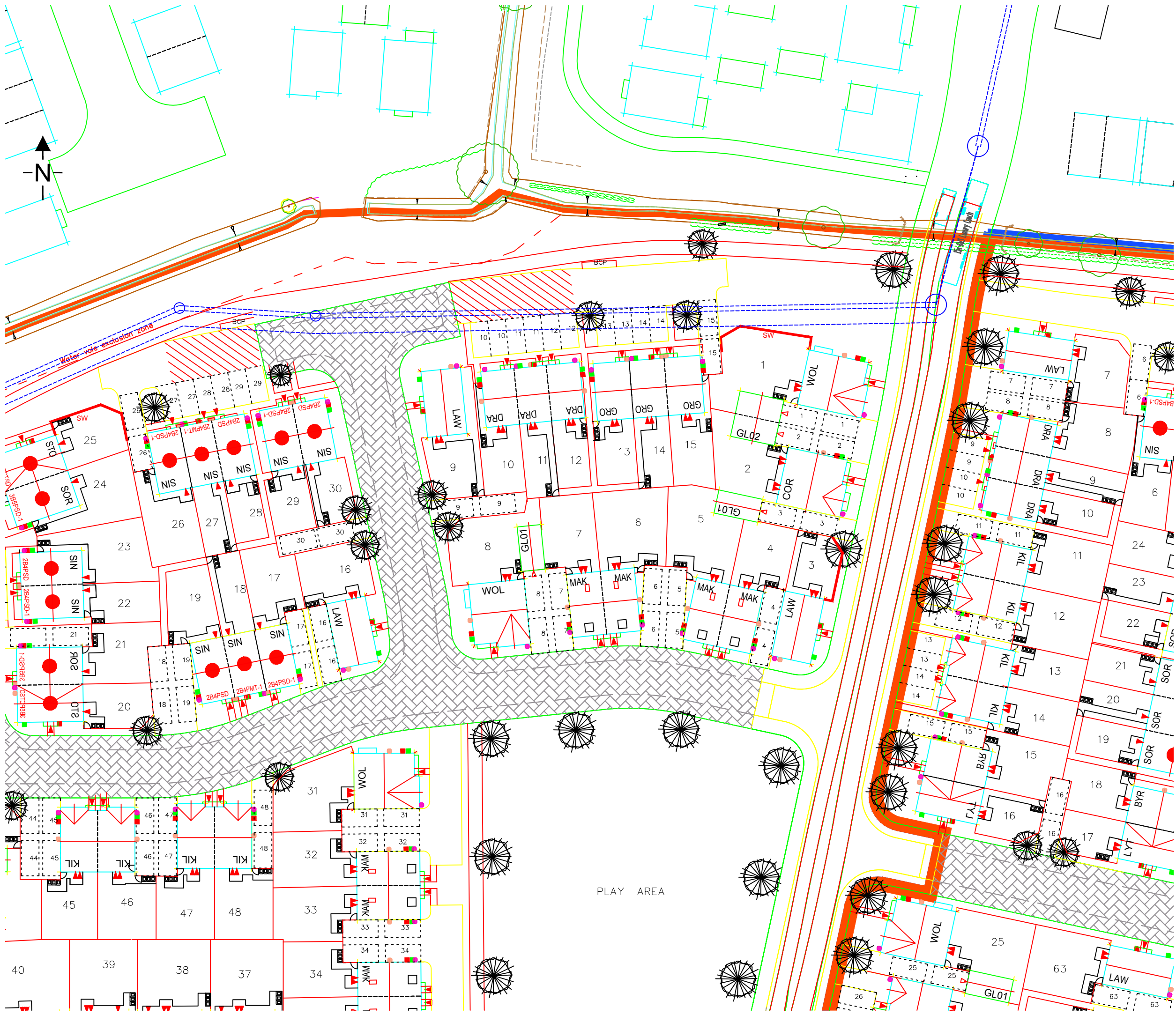
19 Graystones Close
West Bridgford
Nottingham
NG2 6QU
T : 0777 334 7121
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CLIENT
BLOOR HOMES

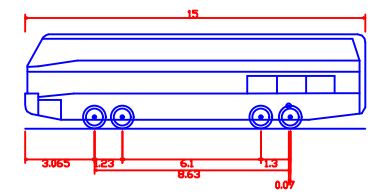
PROJECT
NORMANDY WAY, HINCKLEY

TITLE
INTERNAL ROAD VEHICLE TRACKING: BUS INBOUND (4 OF 4)

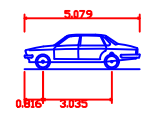
DRAWN SM	AUTHORISED SM	SCALE 1:500	SHEET SIZE A3	DATE 03.01.23
PROJECT NO. C21021		DRAWING NO. DR007		REV A



- 1. THIS DRAWING IS NOT TO BE SCALED FOR CONSTRUCTION PURPOSES.
- 2. THE CONTRACTOR SHALL CHECK ALL DIMENSIONS AND LEVELS ON SITE.



15m 6WS Luxury Coach
Overall Length 15.000m
Overall Width 2.500m
Overall Body Height 4.157m
Min Body Ground Clearance 0.397m
Track Width 2.500m
Lock to lock time 4.00s
Wall to Wall Turning Radius 12.490m



Large Car (2006)
Overall Length 5.079m
Overall Width 1.872m
Overall Body Height 1.525m
Min Body Ground Clearance 0.310m
Max Track Width 1.831m
Lock to lock time 4.00s
Kerb to Kerb Turning Radius 5.900m

A	UPDATED TO SITE LAYOUT No: 009 REV B	09.05.23	SM	SAM
REV	DESCRIPTION	DATE	BY	AUTH

Capricorn Transport Planning

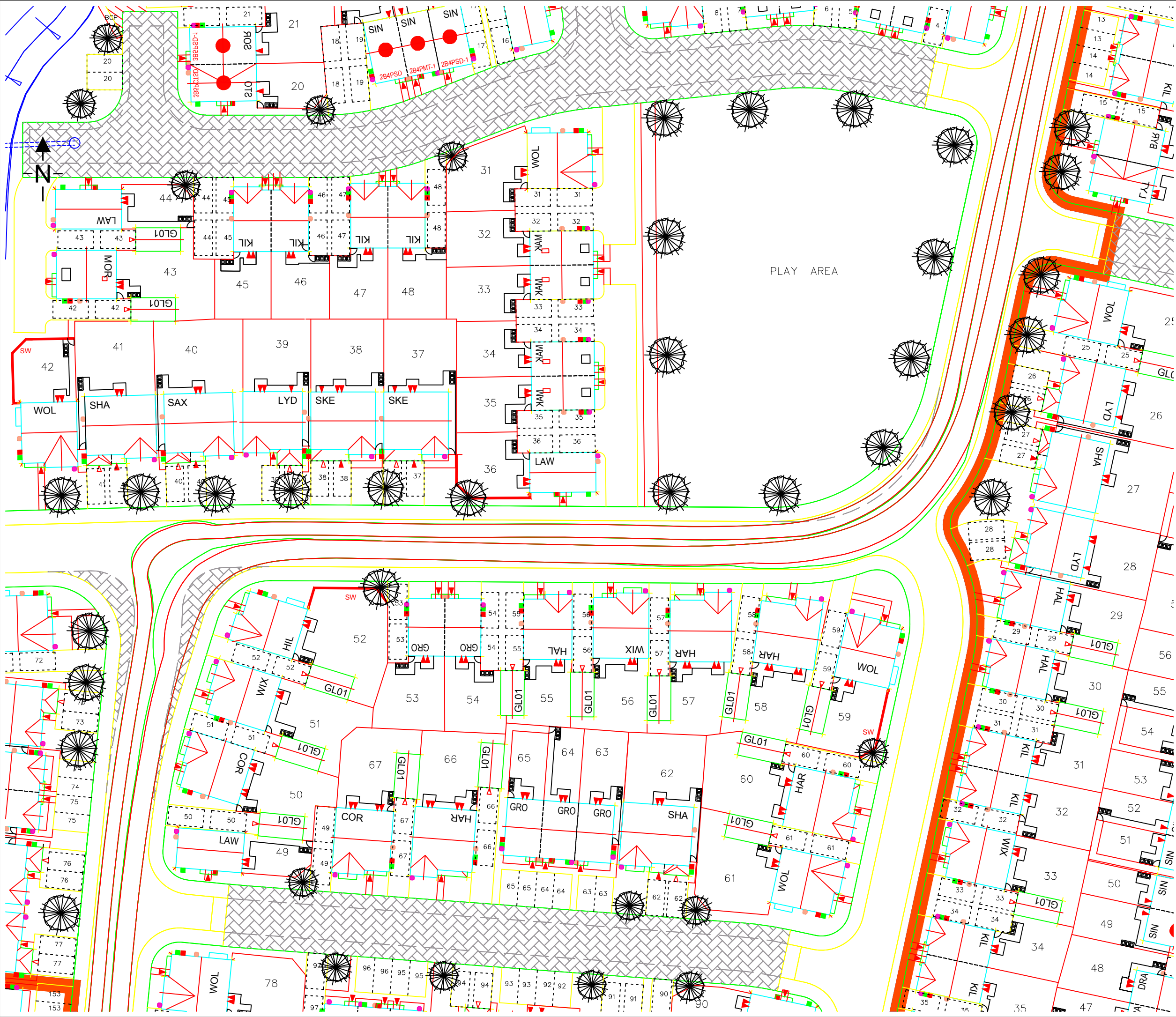
19 Graystones Close
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NG2 6QU
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CLIENT
BLOOR HOMES

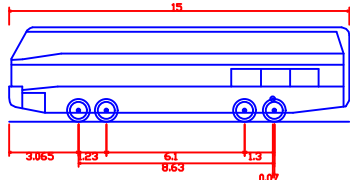
PROJECT
NORMANDY WAY, HINCKLEY

TITLE
INTERNAL ROAD VEHICLE TRACKING: BUS OUTBOUND (1 OF 4)

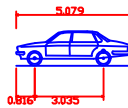
DRAWN SM	AUTHORISED SM	SCALE 1:500	SHEET SIZE A3	DATE 03.01.23
PROJECT NO. C21021		DRAWING NO. DR008		REV A



1. THIS DRAWING IS NOT TO BE SCALED FOR CONSTRUCTION PURPOSES.
2. THE CONTRACTOR SHALL CHECK ALL DIMENSIONS AND LEVELS ON SITE.



15m 6WS Luxury Coach
Overall Length 15.000m
Overall Width 2.500m
Overall Body Height 4.157m
Min Body Ground Clearance 0.397m
Track Width 2.500m
Lock to lock time 5.00s
Wall to Wall Turning Radius 12.490m



Large Car (2006)
Overall Length 5.079m
Overall Width 1.872m
Overall Body Height 1.525m
Min Body Ground Clearance 0.310m
Max Track Width 1.831m
Lock to lock time 4.00s
Kerb to Kerb Turning Radius 5.900m

A	UPDATED TO SITE LAYOUT No: 009 REV B	09.05.23	SM	SAM
REV	DESCRIPTION	DATE	BY	AUTH

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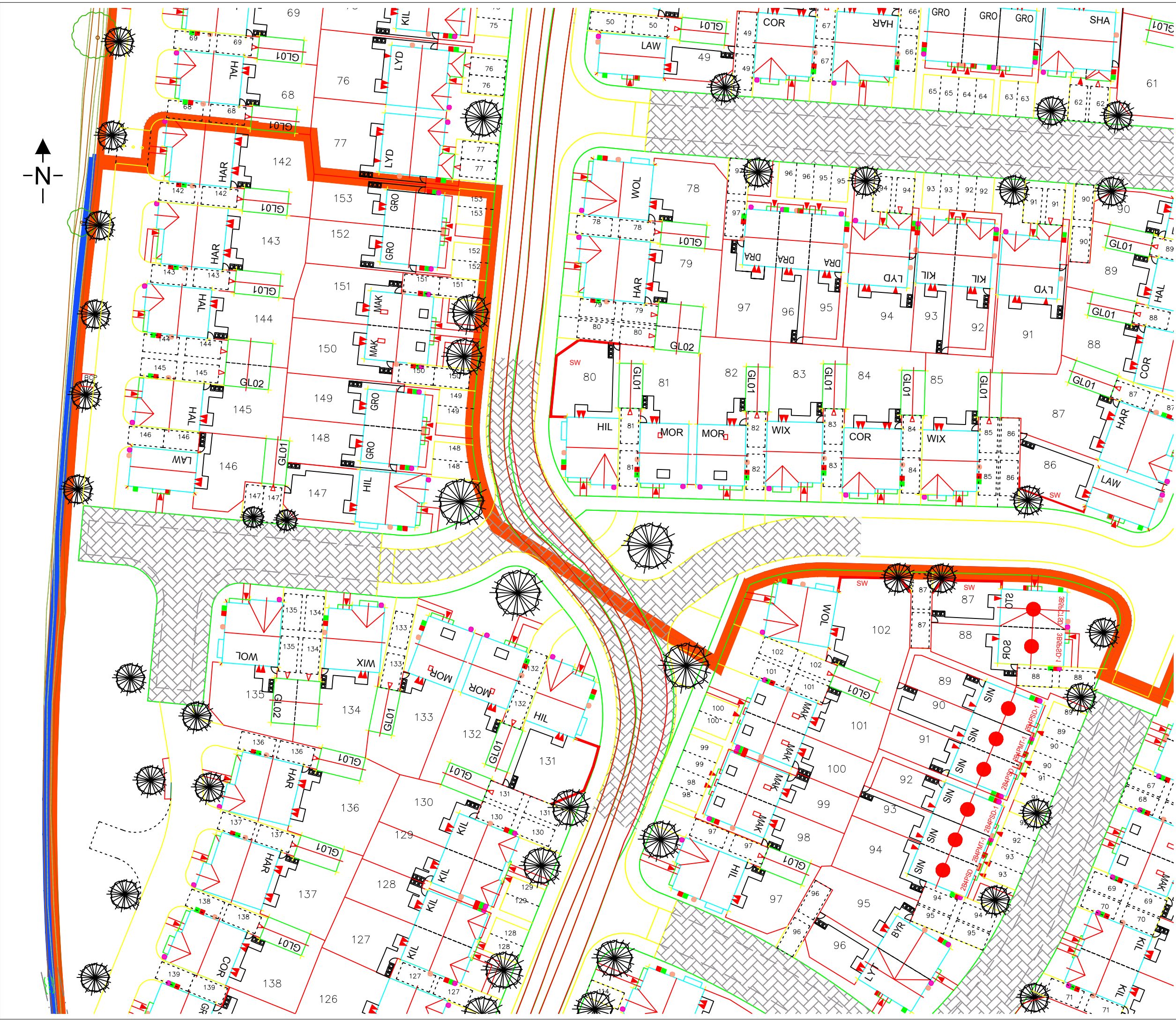
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CLIENT
BLOOR HOMES

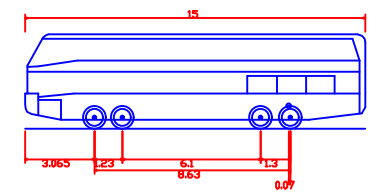
PROJECT
NORMANDY WAY, HINCKLEY

TITLE
**INTERNAL ROAD VEHICLE
TRACKING: BUS OUTBOUND (2 OF 4)**

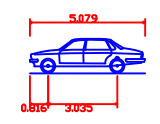
DRAWN SM	AUTHORISED SM	SCALE 1:500	SHEET SIZE A3	DATE 03.01.23
PROJECT NO. C21021		DRAWING NO. DR009		REV A



1. THIS DRAWING IS NOT TO BE SCALED FOR CONSTRUCTION PURPOSES.
2. THE CONTRACTOR SHALL CHECK ALL DIMENSIONS AND LEVELS ON SITE.



15m 6WS Luxury Coach
Overall Length 15.000m
Overall Width 2.500m
Overall Body Height 4.157m
Min Body Ground Clearance 0.397m
Track Width 2.500m
Lock to lock time 3.00s
Wall to Wall Turning Radius 12.490m



Large Car (2006)
Overall Length 5.079m
Overall Width 1.872m
Overall Body Height 1.525m
Min Body Ground Clearance 0.310m
Max Track Width 1.831m
Lock to lock time 4.00s
Kerb to Kerb Turning Radius 5.900m

A	UPDATED TO SITE LAYOUT No: 009 REV B	09.05.23	SM	SAM
REV	DESCRIPTION	DATE	BY	AUTH

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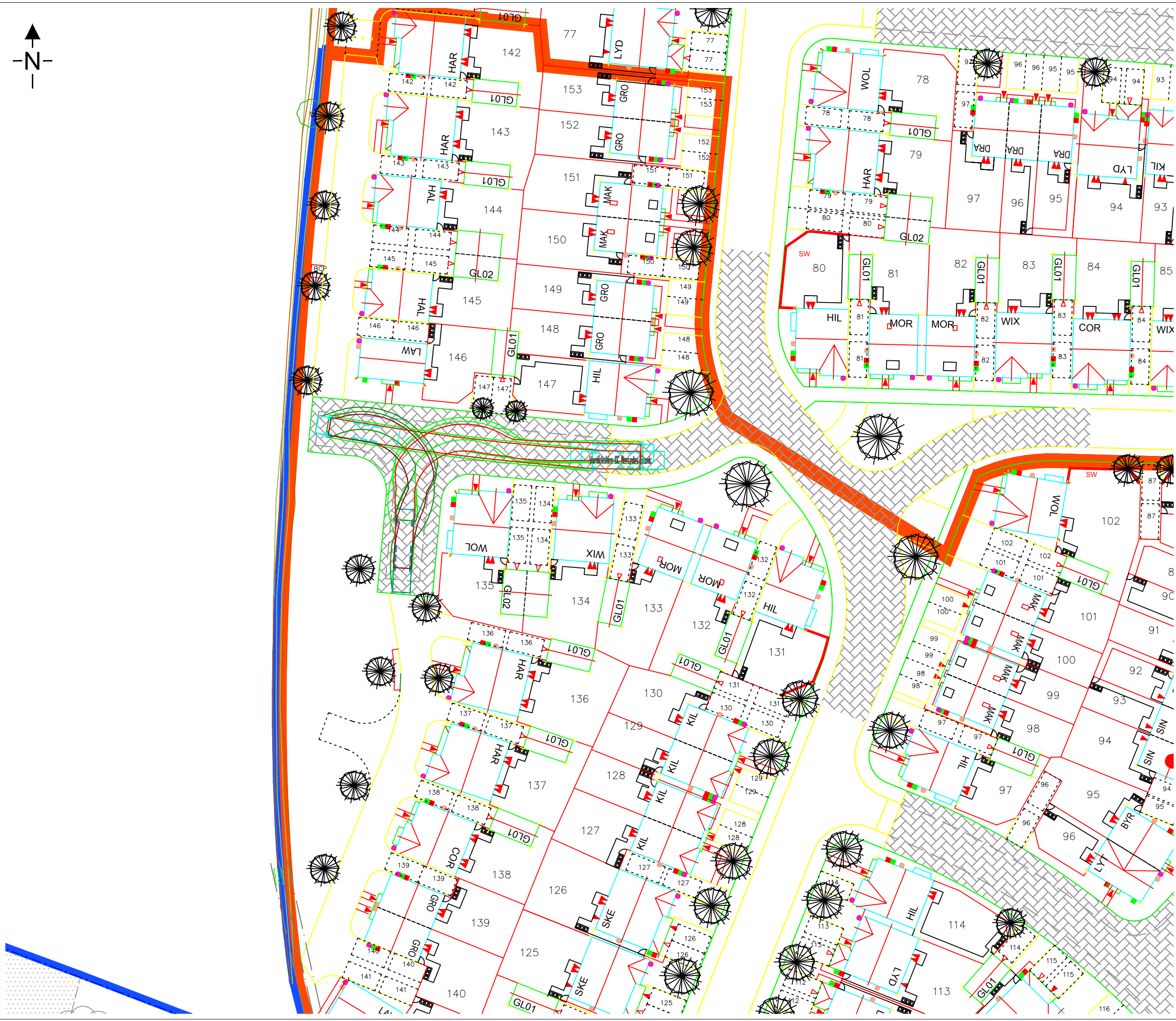
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CLIENT
BLOOR HOMES

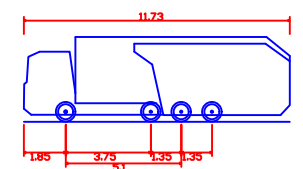
PROJECT
NORMANDY WAY, HINCKLEY

TITLE
INTERNAL ROAD VEHICLE TRACKING: BUS OUTBOUND (3 OF 4)

DRAWN SM	AUTHORISED SM	SCALE 1:500	SHEET SIZE A3	DATE 03.01.23
PROJECT NO. C21021	DRAWING NO. DR010	REV A		



1. THIS DRAWING IS NOT TO BE SCALED FOR CONSTRUCTION PURPOSES.
2. THE CONTRACTOR SHALL CHECK ALL DIMENSIONS AND LEVELS ON SITE.



Warwickshire CC Mercedes Econic
Overall Length 11.730m
Overall Width 2.490m
Overall Body Height 3.749m
Min Body Ground Clearance 0.302m
Track Width 2.490m
Lock to lock time 4.00s
Max Steering Angle (Virtual) 33.00°

REV	DESCRIPTION	DATE	BY	AUTH
A	UPDATED TO SITE LAYOUT No: 009 REV B	09.05.23	SM	SAM

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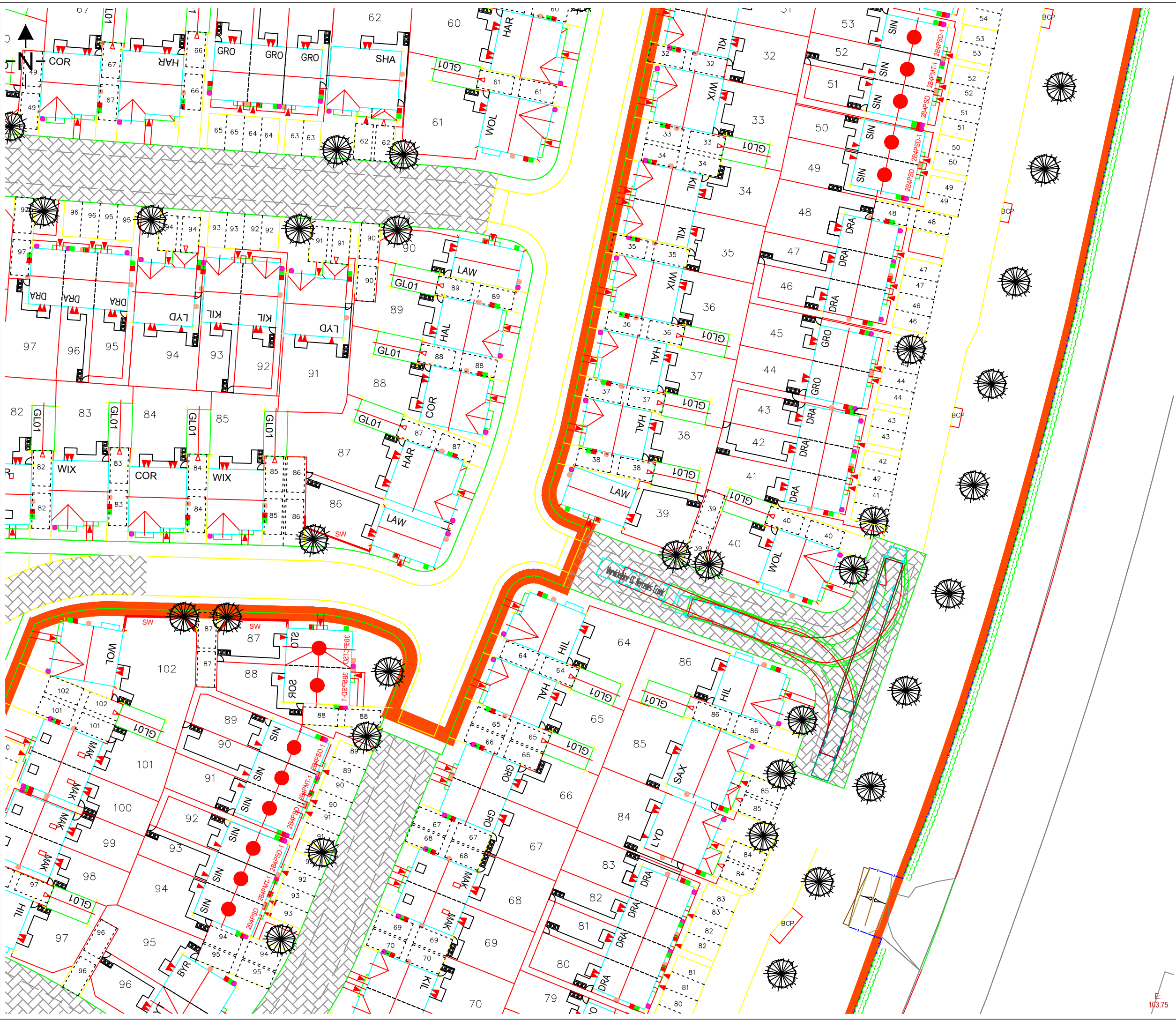
T : 0777 334 7121
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CLIENT
BLOOR HOMES

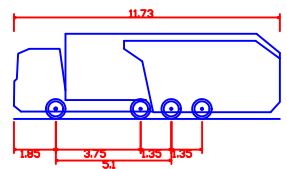
PROJECT
NORMANDY WAY, HINCKLEY

TITLE
INTERNAL ROAD VEHICLE TRACKING: RCV (2 OF 5)

DRAWN SM	AUTHORISED SM	SCALE 1:500	SHEET SIZE A3	DATE 03.01.23
PROJECT NO. C21021	DRAWING NO. DR013	REV A		



1. THIS DRAWING IS NOT TO BE SCALED FOR CONSTRUCTION PURPOSES.
2. THE CONTRACTOR SHALL CHECK ALL DIMENSIONS AND LEVELS ON SITE.



Warwickshire CC Mercedes Eonic
Overall Length 11.730m
Overall Width 3.750m
Overall Body Height 3.749m
Min Body Ground Clearance 0.302m
Track Width 2.490m
Lock to lock time 4.00s
Max Steering Angle (Virtual) 33.00°

A	UPDATED TO SITE LAYOUT No: 009 REV B	09.05.23	SM	SAM
REV	DESCRIPTION	DATE	BY	AUTH

Capricorn Transport Planning

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PROJECT
NORMANDY WAY, HINCKLEY

TITLE
INTERNAL ROAD VEHICLE TRACKING: RCV (3 OF 5)

DRAWN SM	AUTHORISED SM	SCALE 1:500	SHEET SIZE A3	DATE 03.01.23
PROJECT NO. C21021	DRAWING NO. DR014	REV A		

