



TRANSPORT STATEMENT

PROPOSED RESIDENTIAL DEVELOPMENT DOLES LANE, FINDERN

**For
STANTON DEVELOPMENTS**

STA01742-5TT



REPORT DETAILS

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1.0 INTRODUCTION

1.1 Jackson Purdue Lever (JPL) are appointed by Stanton Developments to prepare a Transport Statement (TS) report to support the planning application for residential development on land off Doles Lane, Findern (henceforth referred to as the Site). The location of the Site is indicated on Figure 1.1, in the context of the local highway network.

1.2 Existing Situation

1.2.1 The Site comprises 1no dwelling and a number of garage buildings. All of the garage buildings were used by Archway Motors until they closed the site for business in July 2019. The garage buildings have remained vacant since. All of the existing buildings on the site will be demolished.

1.3 Proposed Development

1.3.1 The proposed development is shown on the architect's masterplan layout that accompanies the planning application. This indicates that the residential scheme will comprise 16 houses.

1.4 Planning Application Documents

1.4.1 The transport policy context for the proposed development is outlined in Chapter 2. The principles of the access strategy adopted for the proposed development are also discussed in Chapter 2, and this provides the means to achieve transport policy objectives. It is fundamental to the approach of the applicant, as represented in this TA, that a holistic view is taken of the consideration of access to the proposed development by all modes of transport.

1.4.2 The issues addressed within the TA fall broadly into the following areas:

- (i) Accessibility by non-car modes, and
- (ii) The vehicular traffic impact on the operational performance of the local highway network, assessed quantitatively for the TA defined study network.

1.4.3 The local highway network is described in Chapter 3. The proposed Site access arrangements are outlined in Chapter 4.

1.4.4 The transport sustainability of the proposed development is a key issue, as set out in the National Planning Policy Framework (NPPF, February 2019), and also Planning Practice Guidance (PPG, March 2014). Accessibility issues are identified in Chapter 2, and an accessibility appraisal of the Site by non-car modes is presented in Chapters 5 (Walk & Cycle) and 6 (Public Transport), using an accessibility mapping methodology.

1.4.5 The estimation of the development generated traffic and associated With Development traffic flows is presented in Chapter 7.

1.4.6 The conclusions of the TA are presented in Chapter 8.



2.0 POLICIES & PRINCIPLES OF ACCESS STRATEGY

2.1 A holistic approach is adopted for the desired access strategy. Due cognisance is taken of a range of relevant policy documents and considerations that represent current national and local policies. These include:

- National Planning Policy Framework (NPPF), February 2019,
- Planning Practice Guidance (PPG), March 2014,
- South Derbyshire District Council Local Plan Part 1, Adopted June 2016,
- Derbyshire Local Transport Plan 3 (up to 2026).

2.2 A general thrust of current national and local policies is to promote and deliver sustainable transport objectives, and this is a key factor in defining the access strategy for the proposed development.

2.3 There are a range of documents that provide advice and guidance identifying that the historic approach of adopting rigid highway design standards and considering this in isolation is not appropriate or desirable in today's world. This includes, for example, Manual for Streets (MfS) and the associated Manual for Streets 2 (MfS2).

2.4 NPPF: Achieving Sustainable Development

2.4.1 The National Planning Policy Framework (NPPF) sets out the Government's planning policies for England and how these should be applied.

2.4.2 Paragraph 7 of NPPF sets out that:

"The purpose of the planning system is to contribute to the achievement of sustainable development. At a very high level, the objective of sustainable development can be summarised as meeting the needs of the present without compromising the ability of future generations to meet their own needs."

2.4.3 In paragraph 10, NPPF makes it clear that:

*"So that sustainable development is pursued in a positive way, at the heart of the Framework is a **presumption in favour of sustainable development**."*

2.5 NPPF: Promoting Sustainable Development

2.5.1 The Government's commitment to sustainable development is emphasised in NPPF. Paragraph 102 advises development promoters to consider transport issues from the earliest stages of plan-making and development proposals, so that:

- a) the potential impacts of development on transport networks can be addressed;*
- b) opportunities from existing or proposed transport infrastructure, and changing technology and usage, are realised – for example in relation to the scale, location or density of development that can be accommodated;*



- c) *opportunities to promote walking, cycling and public transport use are identified and pursued;*
- d) *the environmental impacts of traffic and transport infrastructure can be identified, assessed and taken into account – including appropriate opportunities for avoiding and mitigating any adverse effects, and for net environmental gains; and*
- e) *patterns of movement, streets, parking and other transport considerations are integral to design of schemes, and contribute to making high quality places.”*

2.5.2 This is expanded in paragraph 103, which states:

“The planning system should actively manage patterns of growth in support of these objectives. Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes. This can help to reduce congestion and emissions, and improve air quality and public health. However, opportunities to maximise sustainable transport solutions will vary between urban and rural areas, and this should be taken into account in both plan-making and decision-making.”

The proposed development respects and reflects this NPPF transport sustainability related objective.

2.5.3 NPPF states in paragraph 108 that:

“In assessing sites that may be allocated for development in plans, or specific applications for development, it should be ensured that:

- a) *appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;*
- b) *safe and suitable access to the site can be achieved for all users; and*
- c) *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.”*

2.5.4 NPPF makes it clear in paragraph 109 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**.”* (JPL emphasis).

2.5.5 NPPF offers specific transport advice with respect to development proposals. In paragraph 110, NPPF sets out that development 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.”*

2.6 PPG

2.6.1 The Department for Communities and Local Government (DCLG) launched the Planning Practice Guidance (PPG) web-based resource on 6 March 2014. The PPG includes advice on when transport assessments and transport statements are required, and what they should contain.

2.6.2 The PPG states that:

“Travel Plans, Transport Assessments and Statements can positively contribute to:

- encouraging sustainable travel;*
- lessening traffic generation and its detrimental impacts;*
- reducing carbon emissions and climate impacts;*
- creating accessible, connected, inclusive communities;*
- improving health outcomes and quality of life;*
- improving road safety; and*
- reducing the need for new development to increase existing road capacity or provide new roads.”*

2.6.3 With respect to Transport Assessments and Statements, PPG sets out that:

“The key issues to consider at the start of preparing a Transport Assessment or Statement may include:

- the planning context of the development proposal;*
- appropriate study parameters (i.e. area, scope and duration of study);*
- assessment of public transport capacity, walking/ cycling capacity and road network capacity;*
- road trip generation and trip distribution methodologies and/or assumptions about the development proposal;*
- measures to promote sustainable travel;*
- safety implications of development; and*



- *mitigation measures (where applicable) – including scope and implementation strategy.”*

2.7 South Derbyshire District Council Local Plan Part 1

2.7.1 The South Derbyshire District Council (SDDC) Local Plan Part 1 (LP1) was adopted in June 2016. It sets out the vision, objectives, spatial strategy and policies for future development of the district.

2.7.2 Policy S6 of SDDC LP1 sets out how the sustainable access goals of the Derbyshire Local Transport Plan will be achieved in South Derbyshire. Policy S6 states:

“A The Council will seek to:

- i) minimise the need to travel;*
- ii) make the most efficient use of transport infrastructure and services;*
- iii) encourage modal shift away from the private car and road based freight toward walking, cycling, public transport and rail freight; and*
- iv) support transport measures that address accessibility, safety, amenity, health, social, environmental and economic needs, both current and forecast.*

B This will be achieved by seeking:

- i) patterns of development that enable travelling distances to be minimised and that make best use of existing transport infrastructure and services;*
- ii) the provision of new or enhanced walking, cycling, public transport and rail freight services and infrastructure and, where needs cannot be met by the aforementioned means, highway and car/lorry parking infrastructure; and*
- iii) the use of promotional measures and improved communication to encourage sustainable travel.”*

2.7.3 Policy BNE1 sets out that all new development will be expected to be well designed, embrace the principles of sustainable development, encourage healthy lifestyles and enhance people’s quality of life by adhering to the Design Principles. Street design, movement and legibility are covered in Design Principle B. This states:

“Streets should be designed to relate to their context, with a balance being struck between place-making needs and vehicle movement needs. Streets should be attractive, pedestrian and cycle friendly and meet the needs of all users. New development should be easy to find your way around, have a clear hierarchy of streets and take advantage of available opportunities for connections to local services, including public transport;”

2.7.4 Policy INF2 sets out that the council’s position with regard to contributions. Part A of Policy INF2 states:



“i) Planning permission will be granted for development where:

- a) travel generated by development, including goods vehicle movement, should have no undue detrimental impact upon local amenity, the environment, highway safety, the efficiency of transport infrastructure and the efficiency and availability of public transport services; and*
- b) appropriate provision is made for safe and convenient access to and within the development for pedestrians, cyclists, public transport users and the private car; and*
- c) car travel generated by the development is minimised relative to the needs of the development.*

ii) In order to achieve this, the Council will secure, through negotiation, the provision by developers of contributions towards off-site works where needed.

iii) In implementing this policy account will be taken of the fact that in more remote rural areas there is often less scope to minimise journey lengths and for the use of non-car modes. iv) Planning applications for development with significant transport implications should be accompanied by a Transport Assessment and Travel Plan identifying the transport impacts of the proposal and measures needed to meet the criteria set out in Part 1 of this policy. Travel Plan measures should be funded by developer contributions appropriate to the impacts on the transport network caused by the development. For development that is expected to have less significant transport implications, planning applications shall be accompanied by a Transport Statement.”

2.7.5 Part B of Policy INF2 covers walking and cycling and states:

“i) The Council will work in partnership with County Councils, neighbouring local authorities, the National Forest Company, charitable organisations, landowners and developers to secure the expansion, improvement and protection of walking and cycling networks, including public rights of way, cycle routes, greenways and supporting infrastructure. Routes should be coherent, direct, continuous, safe, secure and attractive and should contribute to the wider green infrastructure network wherever possible.

ii) Where a need is identified in Part 1 of this policy, the Council will seek to negotiate the provision by developers of contributions toward new, or the enhancement of existing, walking and cycling routes and supporting infrastructure.

iii) Development that is likely to prejudice the use of disused railway lines or canals for walking, cycling or horse riding will only be permitted, where it can be demonstrated that there would be no practical prospect of implementation in the future.

iv) Cycling and greenway network proposals will be identified in Supplementary Planning Documents.”

2.7.6 Part C of Policy INF2 covers public transport. Parts (i)-(iii) state:



- i) The Council will work in partnership with County Councils, neighbouring local authorities, public transport operators and community transport operators to improve public transport services, infrastructure and information provision in the district.*
- ii) Development should be designed and laid out in such a way as to ensure that, wherever possible, public transport services are within convenient walking distance of all site residents, staff and visitors.*
- iii) Where a need is identified under Part 1 of this policy, the Council will seek to negotiate the provision by developers of measures to encourage the use of public transport. These may include:
 - a) bus shelters and laybys*
 - b) railway stations and public transport interchanges*
 - c) initial financial contributions toward the cost of running public transport services.”**

2.7.7 Part E of Policy INF2 covers parking within developments and states:

“Development should include appropriate car parking provision having regard to:

- a) parking standards, to be published as a Supplementary Planning Document;*
- b) the need to ensure that development would not have an undue detrimental impact on pedestrian and cyclist movement and highway safety;*
- c) the need to encourage travel on foot, by cycle and by public transport in preference to the private car by minimising parking provision;*
- d) the need to provide sufficient conveniently located spaces to meet the needs of people with impaired mobility;*
- e) the conclusions of any Transport Assessment undertaken in accordance with Part 2 of this policy;*
- f) the need to encourage the use of low emission vehicles.”*

2.8 Derbyshire Local Transport Plan 3

2.8.1 Derbyshire County Council (CCC) is the local highway authority, and has responsibility for the development and delivery of the Local Transport Plan (LTP). The LTP3 covers the period up to year 2026.

2.8.2 The vision of LTP 3 is to achieve a transport system that is both fair and efficient, promotes healthier lifestyles, safer communities, safeguards and enhances the natural environment and provides better access to jobs and services. Whilst also improving choice and accessibility of transport and integrating economic, social and environmental needs.

2.8.3 The DCC LTP3 sets out five transport goals, which are:



1. Supporting a resilient local economy.
2. Tackling climate change.
3. Contributing to better safety, security and health.
4. Promoting equality of opportunity.
5. Improving quality of life and promoting a healthy natural environment.

2.8.4 The plan puts emphasis on supporting a resilient local economy, contributing to better safety, security and health, and improving quality of life and promoting a healthy natural environment.

2.9 Principles of Access Strategy

2.9.1 The access strategy for the development provides the means to achieve the identified policy objectives by optimising the opportunity for access to/from the Site by non-car modes. This is in accordance with all local and national policies.

2.9.2 The accessibility of the Site for those travelling on foot and cycle is reviewed in Chapter 5, and takes account of the existing and proposed facilities. The current accessibility of the Site by public transport is outlined in Chapter 6 herein, together with the development proposals for public transport. The proposed development takes account of the needs of the mobility impaired.

2.9.3 The Access Strategy for the development is cohesive, reflecting the need to appropriately consider and enable provision for the movement of people and goods. This is in accordance with the aims and spirit of NPPF. This includes considering, inter alia:

- Permeability of the Site from/connection to the surrounding locality, for all modes of transport, motorised and non-motorised,
- Internal access arrangements, all to be the subject of reserved matters application(s), should minimise distance travelled by all modes (where appropriate),
- Emergency access requirements must be met.

2.9.4 The development proposals adopt an integrated approach to managing travel demand, offering safe and sustainable access for all by a choice of sustainable transport alternatives, between homes and employment and a range of services and facilities, such as retail, health, education, and leisure.

2.10 Summary

2.10.1 In summary, the development proposal respects and promotes the principles of transport sustainability, and is consistent with national and local transport policy objectives.



3.0 HIGHWAY NETWORK

3.1 The Site has frontage on Doles Lane, which is public highway.

3.2 Doles Lane

3.2.1 Doles Lane is a single carriageway road and subject to a 30mph speed limit in the vicinity of the Site. Doles Lane is typically 6.2-8.0m wide in the vicinity of the Site.

3.2.2 There is footway on the west side of Doles Lane in the vicinity of the Site. Street lighting is present along this footway.

3.2.3 Doles Lane is a bus route and there are bus stops on both sides of the road within a reasonable walk distance of the Site.

3.3 ACCIDENT DATA

3.3.1 The Crashmap website has been interrogated for the latest available five-year accident records for Doles Lane in the vicinity of the Site. The Crashmap accident records cover the 5-year period from 2015-2019.

3.3.2 The Crashmap website confirms that there have been no recorded accidents on Doles Lane in the vicinity of the Site during this period.

4.0 PROPOSED ACCESS ARRANGEMENTS

4.1 Design Philosophy

4.1.1 It is accepted that the way a new residential scheme relates to its surrounding area is key to its success. Guidance on the design of residential developments is set out in documents such as Manual for Streets (MfS). This advocates that residential design should:

- Be based on a hierarchical design process placing pedestrians at the top.
- Recognise that streets fulfil a community function with spaces for social interaction.
- Create an inclusive environment that recognises the needs of all ages and abilities.
- Focus on pedestrian desire lines.
- Create a permeable network of streets with strong connectivity to a range of routes.

4.1.2 The starting point of a new residential scheme is to first identify the existing places/amenities near to the site and their relative importance. Then, from this, form an understanding of how an area works to enable proposed points of connection and linkage to be identified, both within and outside the site, so that important desire lines are achieved. MfS recognises that:

- A permeable and well-connected movement network can positively affect how much people walk or cycle or use public transport which helps to achieve a sustainable environment and good quality of life for its community,



- A good range of local amenities within easy access of residents can help to create a walkable neighbourhood, and
- Walking and cycling are important modes of travel, offering a more sustainable alternative to the car, making a positive contribution to the overall character of the place, public health and to tackle climate change through carbon emissions reductions.

4.1.3 MfS advocates residential design that creates walkable neighbourhoods. MfS sets out in para 4.4.1 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 PPG13 states that walking offers the greatest potential to replace short car trips, particularly those under 2km. MfS encourages a reduction in the need to travel by car through the creation of mixed-use neighbourhoods with interconnected street patterns, where daily needs are within walking distance of most residents.”

4.1.4 A holistic approach to the Site access arrangements is at the core of the development Site access strategy. Thus, there is a cohesive 'package' of development access arrangements for differing modes of travel, comprising, walk, cycle, bus and motor vehicles. Further information about walk and cycle modes is presented in Chapter 5, and about public transport in Chapter 6.

4.2 Site Access Arrangements

4.2.1 Existing Arrangements

4.2.1.1 The existing access arrangements on Doles Lane are shown on Drg No 1739/01. The Site currently benefits from two access points. Drg No 1739/01 shows that both of the access points have limited visibility.

4.2.1.2 The existing carriageway widths on Doles Lane vary from 6.3m to the north of existing access point 1 to 7.8m across the existing frontage and to the south of existing access point 2.

4.2.1.2 The proposed development seeks to close the existing access points and form a single access approximately mid-way along the Site frontage.

4.2.2 Proposed Access Arrangements

4.2.2.1 The proposed Site Access arrangements on Doles Lane are shown on Drg No 1739/02/A.

4.2.2.2 The key features of the proposed Drg No 1739/02/A Site Access/Doles Lane arrangements, and associated highway works, include:

- (i) Introduce new Site Access, forming a 'T' junction with Doles Lane;
- (ii) Junction to operate under priority control;
- (iii) Minor realignment of Doles Lane in vicinity of Site access,
- (iv) Introduce 2.0m footway both sides of the proposed Site access arm;



- (v) Introduce dropped kerbs and tactile paving on footway on south side of access road and opposite on Doles Lane to enhance pedestrian connectivity.
- (vi) Provide 2.4m x 48m visibility splays for vehicles emerging from the Site Access.

4.2.3 Vehicular Speeds and Visibility Requirements

4.2.3.1 There is a 30mph speed limit on Doles Lane.

4.2.3.2 To assist with the design of the Site access junction, the applicant commissioned Automatic Traffic Count (ATC) surveys on Doles Lane in the vicinity of the Site. This involved the installation of pneumatic tubes across Doles Lane near to the western boundary of the Site frontage.

4.2.3.3 The surveys were undertaken between 30 January 2021 and 05 February 2021 (inclusive) and recorded data over the full 24-hour period of each survey day.

4.2.3.4 It is acknowledged that the survey was undertaken during a period of 'national lockdown' which is likely to have reduced traffic volumes on Doles Lane. Traffic volumes are likely to be lower than usual due to the lockdown but sufficient numbers have been recorded to provide an acceptable sample size from which to determine a design speed. The reduced traffic volumes may have resulted in slightly higher vehicular speeds being recorded on Doles Lane, therefore the 85%ile speeds set out below can be considered robust.

4.2.3.5 The recorded 7-day average and 85%ile speeds on Doles Lane are set out below:

	Average	85%ile
Northbound	27.5mph	33.5mph
Southbound	28.5mph;	33.4mph.

4.2.3.6 The Design Speed is **below** the 37.5mph (60kph) MfS threshold in **both** directions. Therefore, the design guidance in **MfS** is applicable to determine the appropriate visibility splays in both directions at Site Access junction.

4.2.4 Stopping Sight Distance

4.2.4.1 The visibility standards in MfS are based on the Stopping Sight Distance (SSD). This is derived from the 85%ile journey speeds together with assumptions regarding driver perception/reaction times and rate of deceleration.

4.2.4.2 Based on the recorded 85%ile speeds, the calculated SSD in each direction is as follows:

	SSD
Northbound	48m
Southbound	48m.

4.2.4.3 Drg No 1739/02/A demonstrates that visibility splays, satisfying MfS standards, are achievable for a vehicle leaving the Site. These visibility splays are an improvement on the visibility that is shown on Drg No 1739/01 in the existing situation.



4.2.5 Swept Path Analysis

4.2.5.1 Swept path analysis of the proposed Site Access junction has been undertaken to examine if the proposed junction can accommodate the tracking movements of larger vehicles. For this exercise, vehicles are adopted that might be generated by the proposed development, albeit on an occasional basis. The results for the Site Access are set out on the following drawings:

- | | | |
|-------|--------------------------------------|---------------|
| (i) | 9.57m Pantechnicon | 1739/SP/01/A, |
| (ii) | 10.14m Large Refuse Vehicle (3 axle) | 1739/SP/02/A, |
| (iii) | 8.68m Fire Appliance | 1739/SP/03/A. |

4.2.5.2 The swept path analysis shown on Drg Nos 1739/SP/01/A-03/A confirms that all of the 'test' vehicles can complete all turns at the junction.

4.2.6 Parking

4.2.6.1 The pre-application response from South Derbyshire District Council confirms that the parking requirements are:

- | | | |
|------|------------------|-------------------|
| (i) | 3-Bedroom house: | 2 parking spaces, |
| (ii) | 4-Bedroom house: | 3 parking spaces. |

4.2.6.2 For external parking spaces the dimensions are 5.5m x 2.4m, with an additional 0.5m strip, on one or both sides, where the space has a hard boundary. Single garages are 3.0 x 6.0m and double garages are 6.0 x 6.0m.

4.2.6.3 The masterplan layout that accompanies the planning application shows the parking arrangements for each dwelling are satisfied.

4.2.7 Electric Vehicle (EV) Charging

4.2.7.1 The scheme includes appropriate EV electrical cabling for each dwelling.

4.2.8 Cycle Parking

4.2.8.1 The scheme is to provide a shed for each dwelling that is capable of storing a cycle.

5.0 WALK & CYCLE

5.1 WALK

5.1.1 It is established and acknowledged that walking is the most important mode of travel at the local level, and offers the greatest potential to replace short car trips, particularly under 2km.



5.1.2 National Travel Survey 2019

5.1.2.1 The National Travel Survey of 2019 (NTS 2019) confirms that 26% of all trips are undertaken on foot. For trips up to 1 mile (1.6km), over three-quarters of journeys are carried out on foot.

5.1.2.2 The NTS also sets out that, on average, people:

- (i) undertake 250 walk trips per year,
- (ii) walk a total of 205 miles per year,
- (iii) spend 17 minutes walking per trip.

Based on the total walk distance of 205 miles and 250 trips per year, this means that the average walk trip is about 0.82 miles (circa 1.3km).

5.1.3 Manual for Streets

5.1.3.1 The 'walkable neighbourhood' concept is set out in MfS1 and endorsed in MfS2. MfS1 explains that:

*"Walkable neighbourhoods are typically characterised by having a range of facilities within 10 minutes' (up to about 800 m) walking distance of residential areas which residents may access comfortably on foot. However, this is **not an upper limit** and PPG13 states that walking offers the greatest potential to replace short car trips, particularly those under 2 km."* (MfS para 4.4.1, JPL emphasis)

5.1.4 Walk Isochrones and Local Amenities

5.1.4.1 The CIHT provides guidance about journeys on foot. It does not provide a definitive view of distances, but does suggest a preferred maximum distance of 2000m for walk commuting trips. A 400m distance corresponds to a walk time of 5 minutes, based upon a typical normal walking speed. Figure 5.1 presents the development 400m, 800m, 1200m, 1600m and 2000m walk isochrones, (ie reflecting 5, 10, 15, 20 and 25-minute walk journeys), and taking account of the pedestrian infrastructure.

5.1.4.2 The walk isochrones presented in Figure 5.1 are created using Basemap TRACC software, a digital mapping and transport data program. The TRACC software enables installation of maps to create a road network. Amendments have been made to the road network to allow for the inclusion of public rights of way and pedestrian access points.

5.1.4.3 The TRACC software adopts the Department for Transport speeds and hence, a walk speed of 4.8km/h is automatically assumed across the road network. However, it is possible to alter the walk speed on all roads to reflect for example, changes in gradient or no accessibility by footway. The walk isochrones presented in Figure 5.1 take into account the absence of footway on certain roads and the walk speed on these routes has been adjusted to 0km/h.

5.1.4.4 Review of Figure 5.1 shows that most of the built-up area of Findern is within a 10-minute walk (800m) of the Site.



5.1.4.5 Indicated on Figure 5.1 are examples of local facilities within an 800m walk of the Site and these include:

- Education: Nursery
- Shopping: Post Office,
- Community: Place of worship, Community Centre,
- Leisure: Salon,
- Transport: Bus stops.

There is also a playground just beyond an 800m walk of the Site to the west of the village.

5.1.4.6 There are additional amenities that are within a 25-minute walk of the Site (2000m). These include;

- Education: Primary School,
- Shopping: Convenience Store,
- Leisure: Sports Ground/Club, Playground/Playing Fields, Food outlets, Salon.

Mercia Marina is also within a 25-minute walk of the Site.

5.1.4.7 It is demonstrated that there is a good range of facilities in Findern that are within a practical walk distance of the Site, that will meet the everyday needs of residents.

5.1.5 Public Rights of Way

5.1.5.1 Figure 5.2 presents the existing Public Rights of Way (PROW) near to the Site. This shows that there are a numerous footpaths and bridleways in the vicinity of the Site. These provide additional pedestrian routes and links to the surrounding area.

5.1.6 Proposed Pedestrian Improvements

5.1.6.1 It is proposed that the following pedestrian infrastructure is installed as part of the Site Access arrangements:

- (i) Introduce 2.0m footway both sides of the proposed Site access arm;
- (ii) Introduce dropped kerbs and tactile paving on footway on south side of access road and opposite on Doles Lane to enhance pedestrian connectivity.

5.1.6.2 The works outlined above offer positive encouragement to residents to elect to walk to nearby amenities, which is in accordance with both local and national policies.

5.2 CYCLING

5.2.1 Cycle Isochrones and Local Amenities

5.2.1.1 It is recognised that cycling also has potential to substitute for short car trips, particularly those under 5km, and to form part of a longer journey by public transport.

5.2.1.2 The CIHT guidance 'Cycle Friendly Infrastructure' (2004) states that:



“Most journeys are short. Three quarters of journeys by all modes are less than five miles (8km) and half under two miles (3.2km) (DOT 1993, table 2a). These are distances that can be cycled comfortably by a reasonably fit person.”(para 2.3)

5.2.1.3 The cycle isochrones presented in Figure 5.3 were created using Basemap TRACC software. The cycle isochrones presented in Figure 5.3 discounts footpaths which do not permit cyclists.

5.2.1.4 Figure 5.3 indicates the 2000m and 5000m cycle isochrones for the Site. Figure 5.3 confirms that all of Findern is within a 2km cycle ride of the Site. Parts of Littleover, Sinfen, Willington and Repton are within a 5000m cycle ride of the Site. There is very good opportunity for residents of the proposed development to undertake journeys to/from the Site by cycle.

5.2.1.5 Figure 5.4 presents the cycle routes near to the Site. A Derbyshire Cycle Network route runs from the east of Findern providing a route towards Stenson. National Cycle Network (NCN) Regional Route 66 (Derby Orbital Cycle Route) also runs within a 25-minute cycle ride of the Site (5000m). This route is circular and connects together the main suburbs of Derby City.

5.3 SUMMARY

5.3.1 Transport sustainability is a principle underlying the proposed development. Encouraging walk and cycle journeys is recognised as important. The location of the Site provides a good context for journeys of residents to be undertaken on foot and by cycle. There is good walk and cycle infrastructure between the Site and nearby amenities, thereby offering opportunity to foster a sustainable community, in accordance with the aims of local policies and national policy in NPPF.

6.0 PUBLIC TRANSPORT

6.1 The proposed development affords opportunity for development generated public transport journeys to be made by bus.

6.2 BUS

6.2.1 Existing Bus Stops

6.2.1.1 There are existing bus stops on Doles Lane as follows:

- (i) Northbound: 110m from the centre of the Site, and
- (ii) Southbound: 210m from the centre of the Site.

6.2.1.2 The stop catering for northbound services comprises a flag and pole with a shelter. In the southbound direction, the stop comprises a shelter with seating. The stops also include low floor access kerbing.



6.2.2 Bus Services & Frequencies

6.2.2.1 The existing bus services calling at stops with a 400m walk of the Site are summarised in Table 6.1.

6.2.2.2 The **218** bus service operates between Findern and John Port School on Mondays to Friday school days only, with 1 trip to the school in the AM and 1 return trip in the PM.

6.2.2.3 The **V3** bus service is operated by Trent Barton and provides a service between Derby and Burton-on-Trent. This service also calls at Littleover. During the day, the V3 service operates on a 60-minute frequency. Bus journey times between Findern and Derby vary between 22-39 minutes, depending on the time of day, but the typical journey times is 25 minutes. Bus journey times between Findern and Burton-on-Trent are between 22-26 minutes.

6.2.3 Bus Services for Commuting

6.2.3.1 Morning V3 bus services departing from Findern for Derby are:

Departing from Findern	Arriving at Derby Bus Station
0713	0736
0801	0840.

6.2.3.2 Morning V3 bus services departing from Findern for Burton-on-Trent are:

Departing from Findern	Arriving at Burton-on-Trent
0616	0638
0701	0723
0804	0836.

6.2.3.3 Evening V3 bus services departing from Derby for Findern are:

Departing from Derby Bus Station	Arriving at Findern
1615	1641
1715	1747
1815	1839.

6.2.3.4 Evening V3 bus services departing from Burton-on-Trent for Findern for are:

Departing from Burton-on-Trent	Arriving at Findern
1610	1639
1720	1750
1825	1850.

6.2.3.5 These services coincide with typical workplace start and finish times for journeys to/from Derby and Burton-on-Trent. This means that residents of the Site have good opportunity to complete commuting journeys to/from Derby and Burton-on-Trent by bus.



6.2.4 Measures to Encourage Bus Use

6.2.4.1 The nearest bus stop to the Site is on Doles Lane and is about a 110m walk from the centre of the Site. The most direct walk route between the Site and the bus stop for residents of the development is along the Site access road and across Doles Lane. The development proposes:

- (i) Introduce 2.0m footway both sides of the proposed Site access arm;
- (ii) Introduce dropped kerbs and tactile paving on footway on south side of access road and opposite on Doles Lane to enhance pedestrian connectivity.

6.2.4.2 The works outlined above offer positive encouragement to residents to access bus services that call at this bus stop, which is in accordance with both local and national policies.

6.3 RAIL

6.3.1 Willington Rail Station is approximately 2850m from the Site which is well within a reasonable cycle ride of the Site. The station is operated by East Midlands Railway and has 6no cycle storage spaces.

6.3.2 The V3 bus service also calls at Willington Rail Station and is approximately a 6 minute journey from the bus stops closest to the Site.

6.3.3 There are occasional rail services available from this station to destinations such as;

- Burton-on-Trent 7 minutes
- Derby 8-10 minutes
- Tamworth 18-20 minutes
- Birmingham New St 39-42 minutes
- Nottingham 39-48 minutes.

6.3.4 The V3 bus service also calls at Burton-on-Trent rail station which is approximately a 30 minute bus journey from the stops closest to the Site.

6.3.5 There are more frequent rail services available from this station to destinations such as;

- Derby 15 minutes
- Tamworth 12 minutes
- Birmingham New St 35 minutes
- Nottingham 45 minutes.

6.3.6 There is opportunity for residents of the Site to complete commuting and leisure journeys to/from large conurbations such as Birmingham, Tamworth and Nottingham.

6.4 SUMMARY

6.4.1 There are existing public transport opportunities near to the application Site.



- 6.4.2 Site residents have the option of frequent travel by bus and train to/from key centres such as Derby and Burton-on-Trent. Services operate weekdays and weekends. It is demonstrated that the Site has good public transport accessibility and this is in accordance with the aims and objectives of current national and local policies.

7.0 TRAFFIC FLOWS

7.1 Peak Periods

- 7.1.1 The times when the combination is greatest of traffic generated by the proposed development and existing highway network traffic are the weekday AM and PM peak hours. The appraisal includes quantitative analysis of the traffic impact of the proposed development for these periods.

7.2 EXISTING DEVELOPMENT

- 7.2.1 The Site was formerly occupied by Archway Motors of Findern Ltd and operated as a garage/dealership. There are a number of garage buildings at the Site and 1no residential dwelling. The total footprint of the garage buildings is 1488.10sm. At the time of preparing this TS report, the Site was unoccupied.

7.2.2 Trip Rates: Garages

- 7.2.2.1 It is necessary to estimate the traffic that could be generated by the existing garages occupying the Site. JPL has undertaken an interrogation of the TRICS database to establish suitable AM & PM peak hour trip rates. Criteria used in the search for the garages includes:

- Vehicle Repair Garage (Slow Fit);
- Sites between 136-5100sm GFA;
- Monday-Friday;
- Remove entries in Edge of Town Centre and Free-Standing locations;
- Sites in Ireland, Northern Ireland and Greater London excluded on the basis that they may have significantly different travel characteristics;
- If a site has multiple survey date entries, include only the most recent survey used within the identified TRICS sample, (to avoid statistical bias in the trip rates identified for use in the analysis).

- 7.2.2.2 On this basis, 5 sites are identified and the results of the TRICS interrogation are included in Appendix B. TRICS explicitly states that the 85%ile statistic is not reliable for a database with less than 20 entries. Thus, average trip rates are adopted to estimate the traffic generated by the existing garage use.

- 7.2.2.3 The AM and PM peak hour trip rates (for total vehicle movements) based on the above TRICS interrogation are:

	ARR	DEP	2-WAY
AM	1.388	0.564	1.952
PM	0.520	1.214	1.734



7.2.3 Generated Traffic: Garages

7.2.3.1 The estimated AM & PM peak hour traffic generated by the existing garages is:

	ARR	DEP	2-WAY
AM	21	8	29
PM	8	18	26.

7.2.4 Trip Rates: Houses

7.2.4.1 It is necessary to estimate the traffic that could be generated by the existing residential dwelling occupying the Site. JPL has undertaken an interrogation of the TRICS database to establish suitable AM & PM peak hour trip rates. Criteria used in the search for houses includes:

- Houses – Privately owned;
- Sites between 8-24 units;
- Monday-Friday;
- Remove entries in Edge of Town Centre and Free-Standing locations;
- Remove entries that also include flats or bungalows;
- Sites in Ireland, Northern Ireland and Greater London excluded on the basis that they may have significantly different travel characteristics;
- If a site has multiple survey date entries, include only the most recent survey used within the identified TRICS sample, (to avoid statistical bias in the trip rates identified for use in the analysis).

7.2.4.2 On this basis, **14** sites are identified and the results of the TRICS interrogation are included in Appendix B. TRICS explicitly states that the 85%ile statistic is not reliable for a database with less than 20 entries. Thus, average trip rates are adopted to estimate the traffic generated by the existing residential dwelling.

7.2.4.3 The AM and PM peak hour trip rates (for total vehicle movements) based on the above TRICS interrogation are:

	ARR	DEP	2-WAY
AM	0.142	0.419	0.561
PM	0.337	0.150	0.487

7.2.5 Generated Traffic: Houses

7.2.5.1 The estimated AM & PM peak hour traffic generated by the existing residential dwelling is:

	ARR	DEP	2-WAY
AM	0	1	1
PM	1	0	0.

7.3 PROPOSED DEVELOPMENT

7.3.1 The Proposed Site Plan shows that the Site will comprise 16no detached houses.



7.3.2 Trip Rates

7.3.2.1 The TRICS database is interrogated to identify suitable trip generation rates to adopt for estimating the AM and PM peak hour traffic generated by the proposed development. The TRICS interrogation set out in paragraph 7.2.4 and included in Appendix B is used to identify suitable trip generation rates for the proposed Houses.

7.3.3 Generated Traffic

7.3.3.1 The AM and PM peak hour trip rates (for total vehicle movements) based on the TRICS interrogation are set out in paragraph 7.2.4 above.

7.3.3.2 The consequent estimate of total vehicle trips generated by the **16 houses** in the AM and PM peak hours is:

	ARR	DEP	2-WAY
AM	2	7	9
PM	5	3	8.

7.4 NET CHANGE IN TRAFFIC

7.4.1 The estimated change in AM & PM peak hour traffic as a result of replacing the existing uses with the proposed residential development is:

Situation	AM			PM		
	ARR	DEP	2-WAY	ARR	DEP	2-WAY
Existing Garages	21	8	29	8	18	26
Existing dwelling	0	1	1	1	0	1
Proposed Residential	2	7	9	5	3	8
Change	-19	-2	-21	-4	-15	-19.

7.5 SUMMARY

7.5.1 The estimated net change in traffic as a result of replacing the existing uses with the proposed residential development is **-21** vehicles (2-way) in the AM peak hour and **-19** vehicles (2-way) in the PM peak hour. This will be a material reduction in traffic generated by the Site. The proposed residential development will not have a material impact on the local highway network in the AM & PM peak hours.

8.0 SUMMARY & CONCLUSIONS

8.1 Jackson Purdue Lever are appointed by Stanton Developments to prepare a Transport Statement report to support the planning application for residential development on land off Doles Lane, Findern. The application Site currently comprises a number of buildings which



were formerly occupied by Archway Motors of Findern Ltd. The proposed development comprises a residential development of 16no dwellings.

- 8.2 The Site currently benefits from two access points on Doles Lane. Both of the access points have limited visibility. The proposed development seeks to close the existing access points and form a single access approximately mid-way along the Site frontage.
- 8.3 The applicant has undertaken an ATC survey of Doles Lane to establish vehicle speeds. Based on the speed survey, the required level of visibility is 2.4m x 48m to the left and 2.4m x 48m to the right. Drg No 1739/02 confirms that this level of visibility can be achieved from the new access position.
- 8.4 The principle of transport sustainability underlies the masterplan development. The location of the Site provides a good context for journeys to be undertaken on foot and by cycle, and the masterplan access strategy reflects this with the provision of good permeability and connectivity for pedestrians and cyclists.
- 8.5 It is proposed that the following pedestrian infrastructure is installed as part of the Site Access arrangements:
- (i) Introduce 2.0m footway both sides of the proposed Site access arm;
 - (ii) Introduce dropped kerbs and tactile paving on footway on south side of access road and opposite on Doles Lane to enhance pedestrian connectivity.
- 8.6 It is demonstrated that the Site has good public transport accessibility, with opportunities for frequent travel by bus and rail, including weekdays and weekends. This is in accordance with the aims and objectives of current national and local policies.
- 8.7 Analysis is undertaken of the traffic impact of the proposed development on the local highway network. The proposed development is estimated to have a two-way net reduction in traffic of **-21** vehicles in the AM peak hour and **-19** vehicles in the PM peak hour. On this basis, it is concluded that the proposed residential development has **no material detrimental impact** on the operational performance of the TA highway network.
- 8.8 It is concluded that the proposed development is in accordance with national and local transport policies, and that there are no transport/highways reasons for refusal of planning permission.



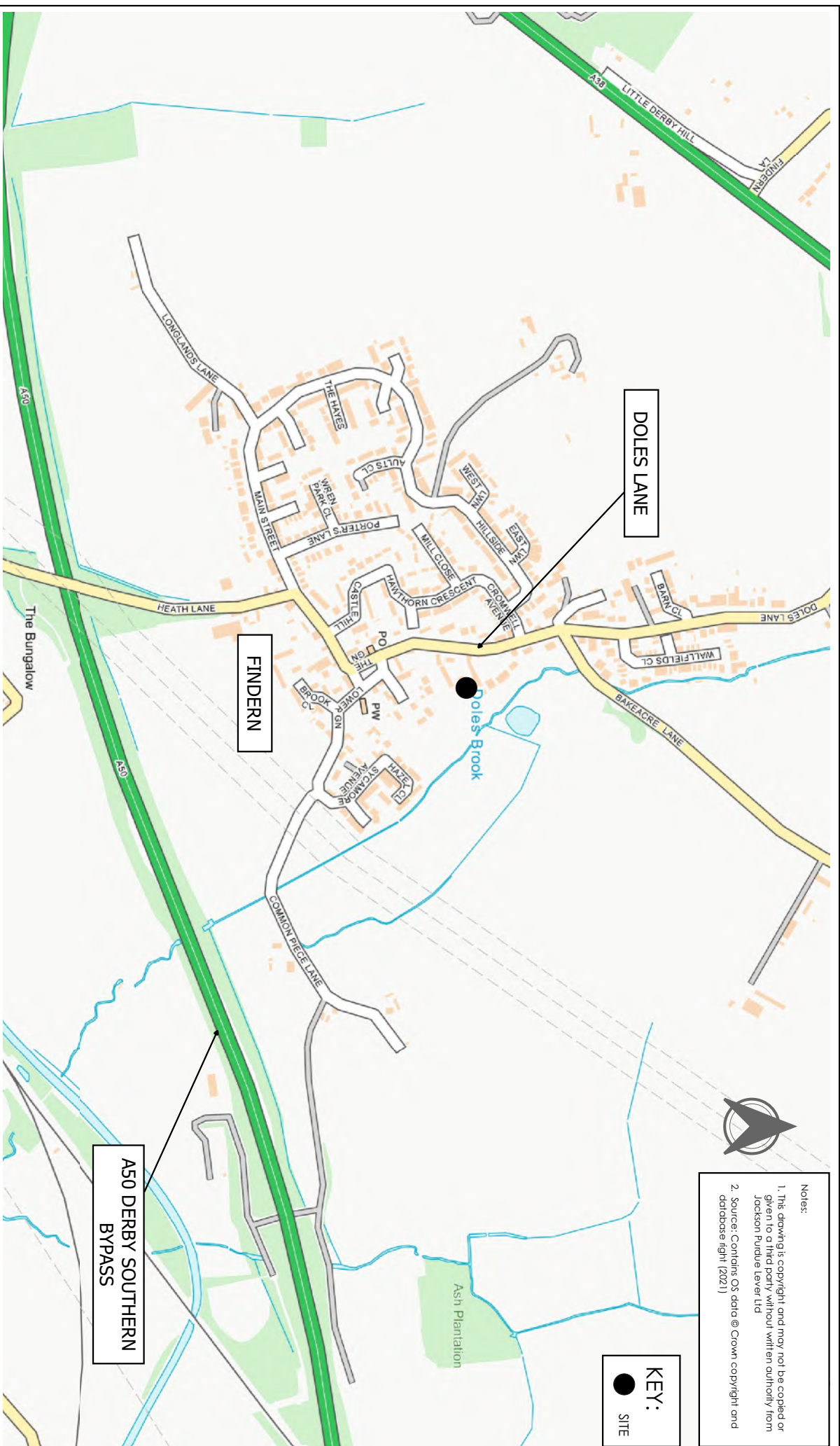
FIGURES



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KEY:

● SITE



Project:
DOLES LANE, FINDERN

Title:
LOCATION PLAN

Client:
STANTON DEVELOPMENTS

FIGURE 1.1

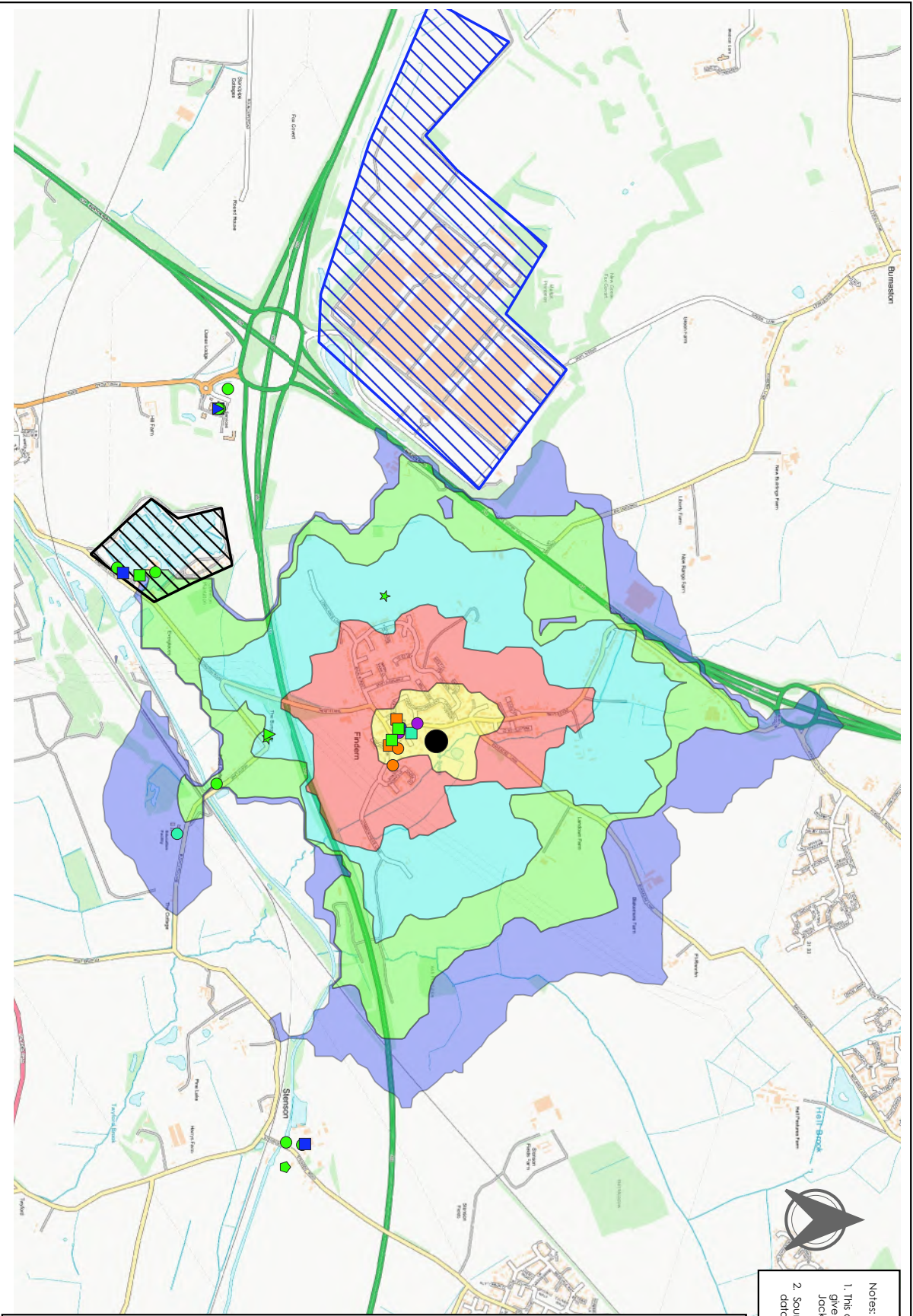
Date:
JANUARY 2021

Scale:
NTS



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KEY:

● SITE

Amenities

● Bus Stop

● Primary School

■ Nursery

■ Place of Worship

■ Community Centre

■ Post Office

■ Convenience Store

▲ ATM

● Food Outlet

■ Salon

▲ Sports Ground/ Club

◆ Leisure Facility

★ Playground/ Playing Field

■ Mercia Marina

▨ Toyota Manufacturing

Walk Isochrones

■ 400m

■ 800m

■ 1200m

■ 1600m

■ 2000m

Project:
DOLES LANE, FINDERN

Title:
WALK ISOCHRONES AND AMENITIES

Client:
STANTON DEVELOPMENTS

FIGURE 5.1

Date:
JANUARY 2021

Scale:
NTS





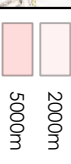
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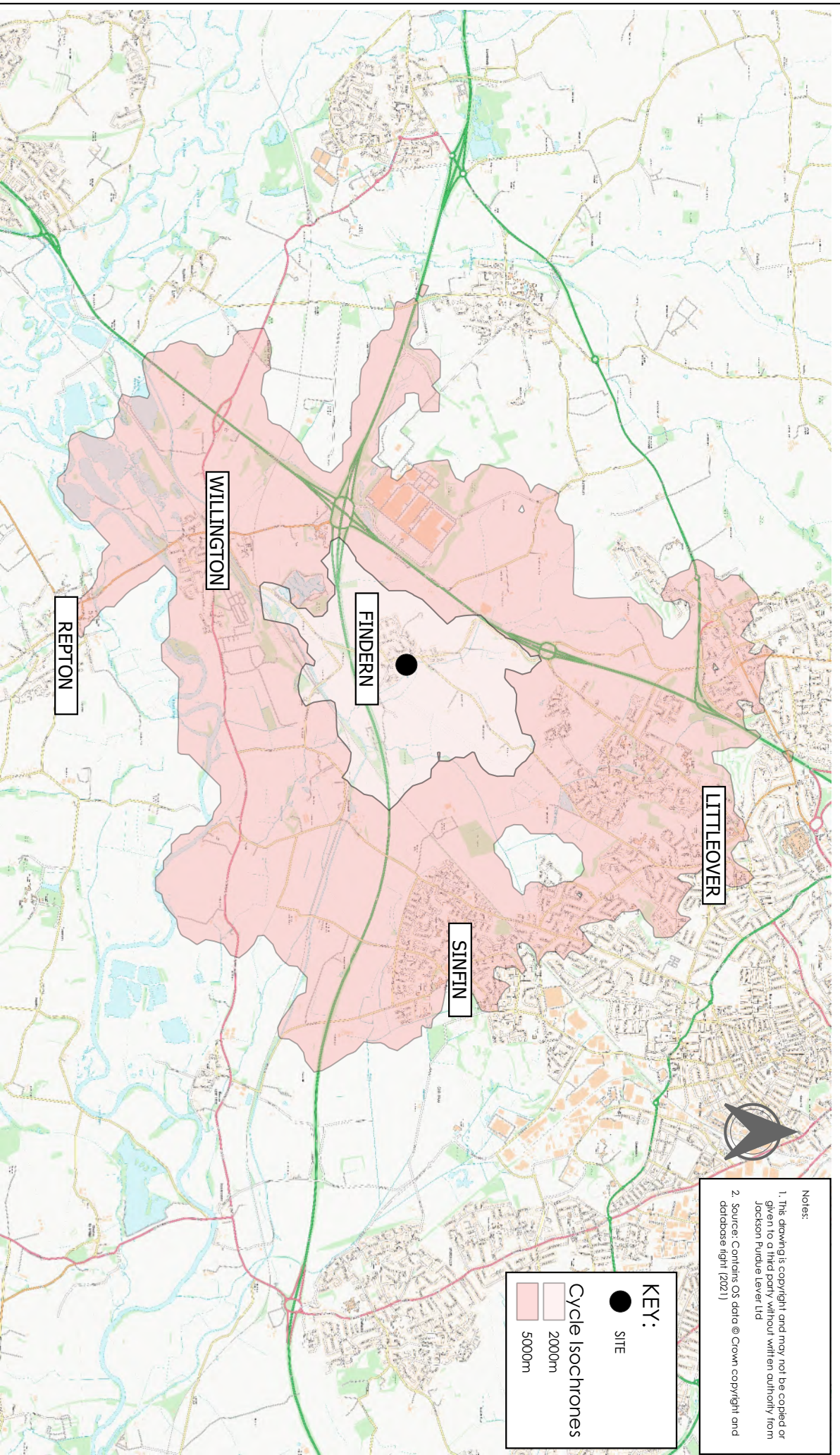


SITE

Cycle Isochrones



2000m
2500m
5000m



Project:

DOLES LANE, FINDERN

Title:

CYCLE ISOCHRONES

Client:

STANTON DEVELOPMENTS

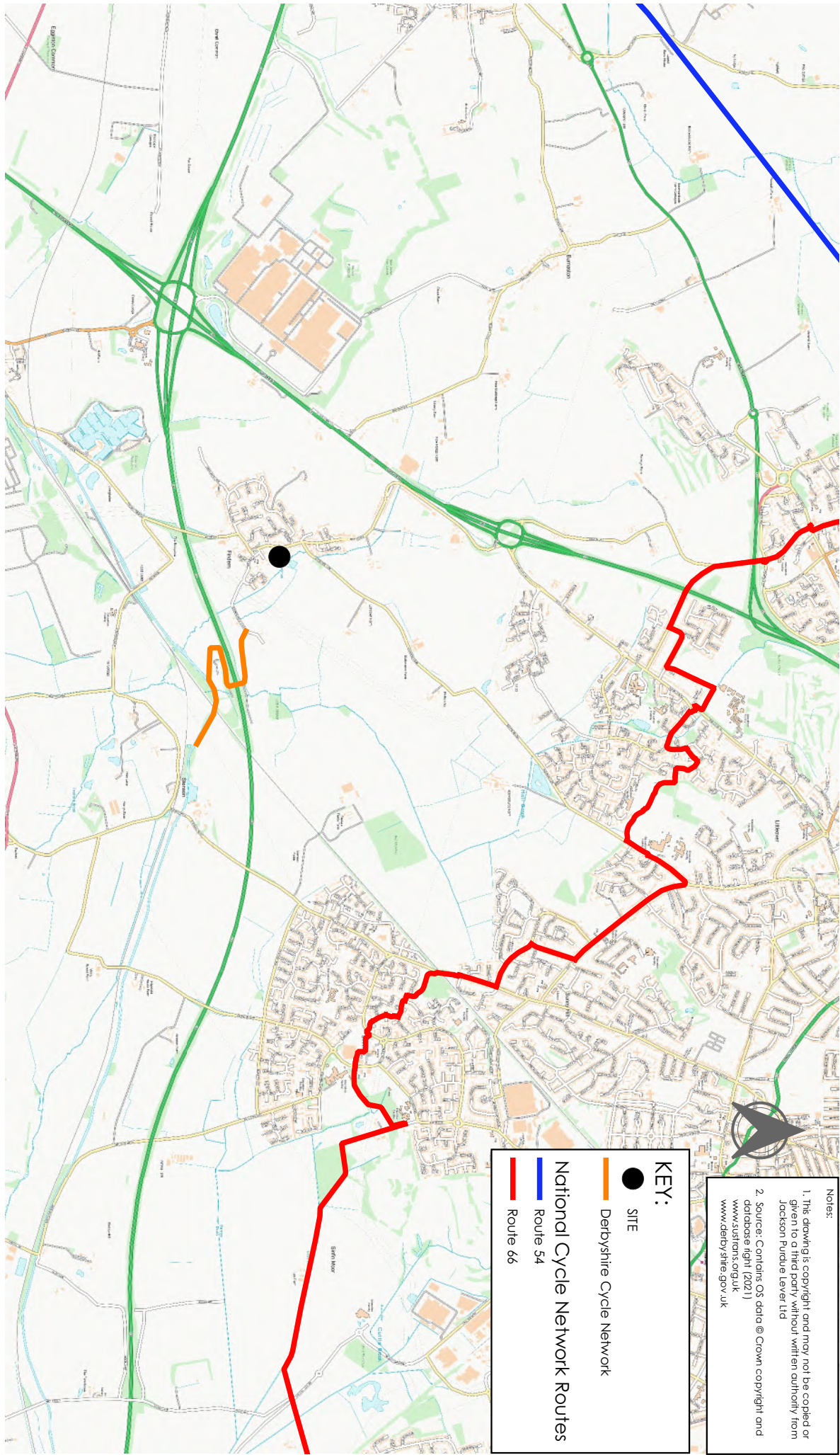
FIGURE 5.3

Date:

JANUARY 2021

Scale:

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www.sustrans.org.uk
www.derbyshire.gov.uk

KEY:

- SITE
- Derbyshire Cycle Network

National Cycle Network Routes

- Route 54
- Route 66

Project: DOLES LANE, FINDERN		Title: CYCLE ROUTES	
Client: STANTON DEVELOPMENTS		FIGURE 5.4	
		Date: JANUARY 2021	Scale: NTS



TABLES

BUS NUMBER	ROUTE	FREQUENCY			OPERATOR
		MONDAY-SATURDAY		SUN	
		DAY	EVE		

Services calling on Doles Lane within 400m of Site (a 5 minute walk)					
218	Findern – John Port School, Etwall	2 trips ^[1]	-	-	HC
V3	Derby – Barrow upon Trent	3 trips ^[2]	-	-	ND
V3	Derby – Littleover – Findern – Willington – Repton – Burton upon Trent	60 mins	60 mins	60 mins	TB

Source:

www.bustimes.org.uk, www.traveline.info, www.nottsderby.co.uk, www.trentbarton.co.uk

Notes:

1. 2 trips, 1 in each direction. Service operates on schooldays only.
2. 3 trips, 1 in direction to Derby in the AM and 2 in direction to Willington/ Barrow upon Trent in the PM. Service operates Monday-Friday only.

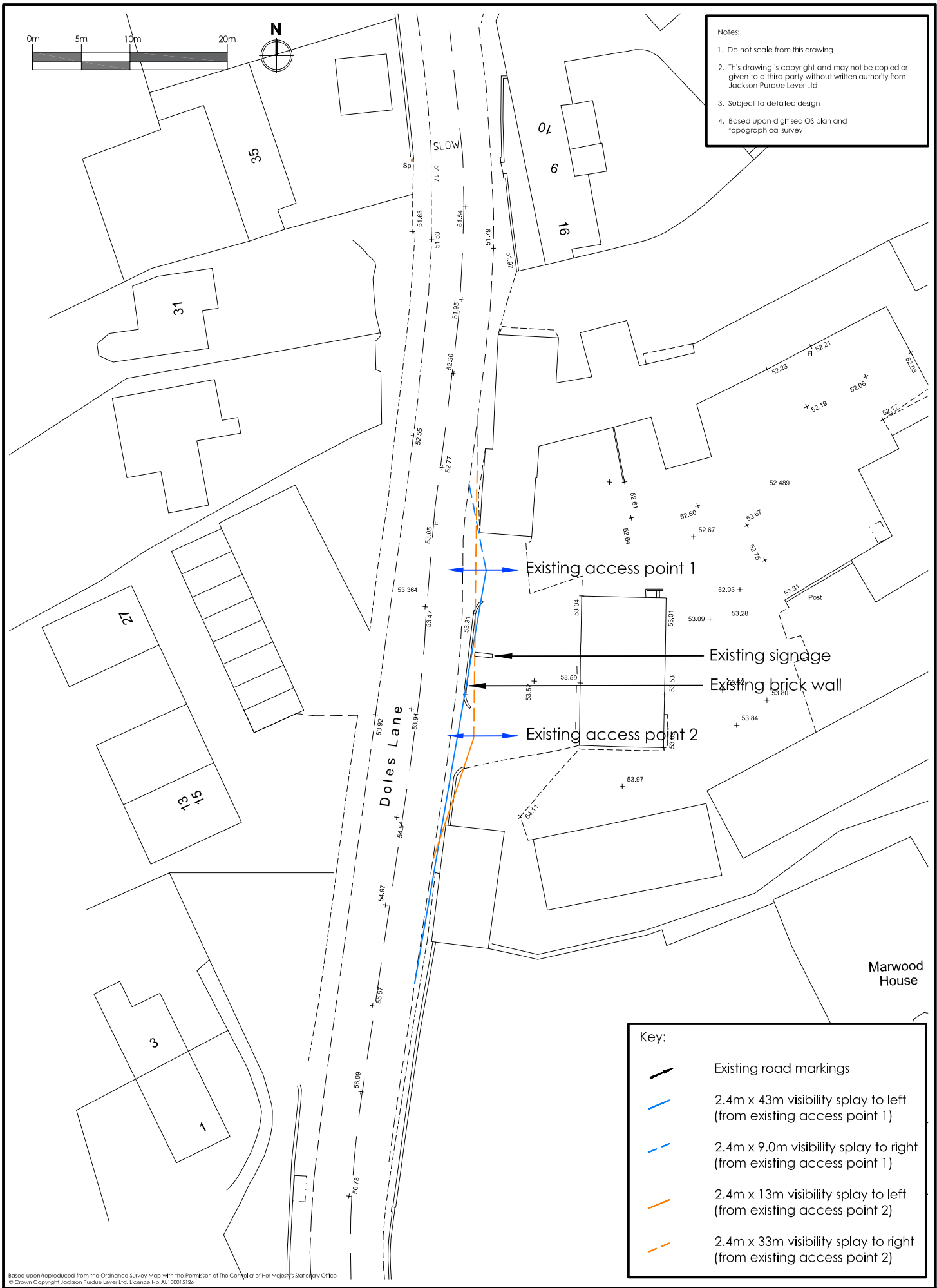
Key:

HC Harpurs Coaches
ND Notts and Derby
TB Trent Barton

Table 6.1 Bus Services & Frequencies



DRAWINGS

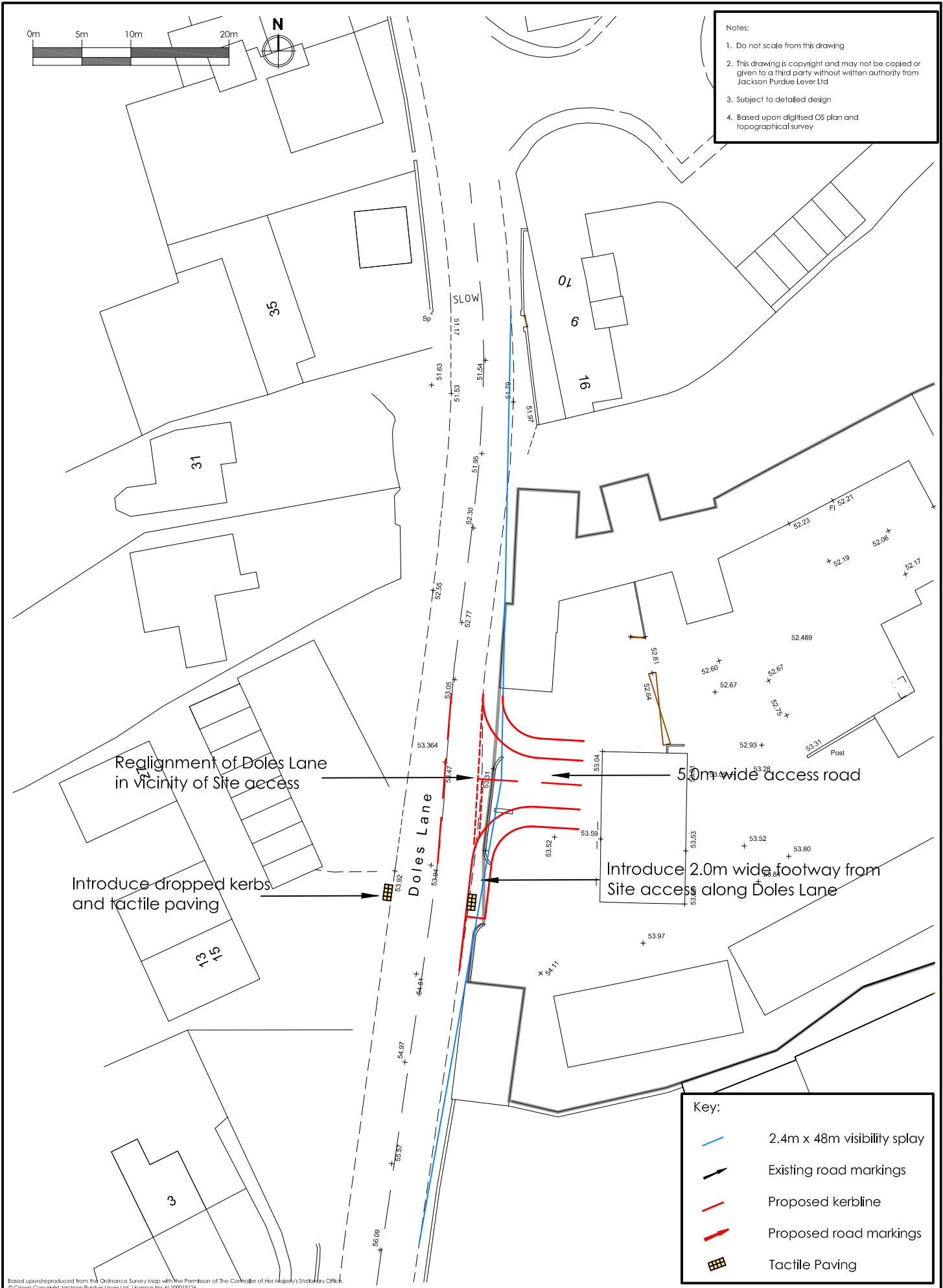


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 4. Based upon digitised OS plan and topographical survey

- Key:
- Existing road markings
 - 2.4m x 43m visibility splay to left (from existing access point 1)
 - 2.4m x 9.0m visibility splay to right (from existing access point 1)
 - 2.4m x 13m visibility splay to left (from existing access point 2)
 - 2.4m x 33m visibility splay to right (from existing access point 2)

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Project	DOLES LANE, FINDERN	Client	STANTON DEVELOPMENTS	Drawing No	1739/01	Rev	
Title	EXISTING ACCESS ARRANGEMENTS	Date	FEB 2021	Scale	1:500 @ A4		

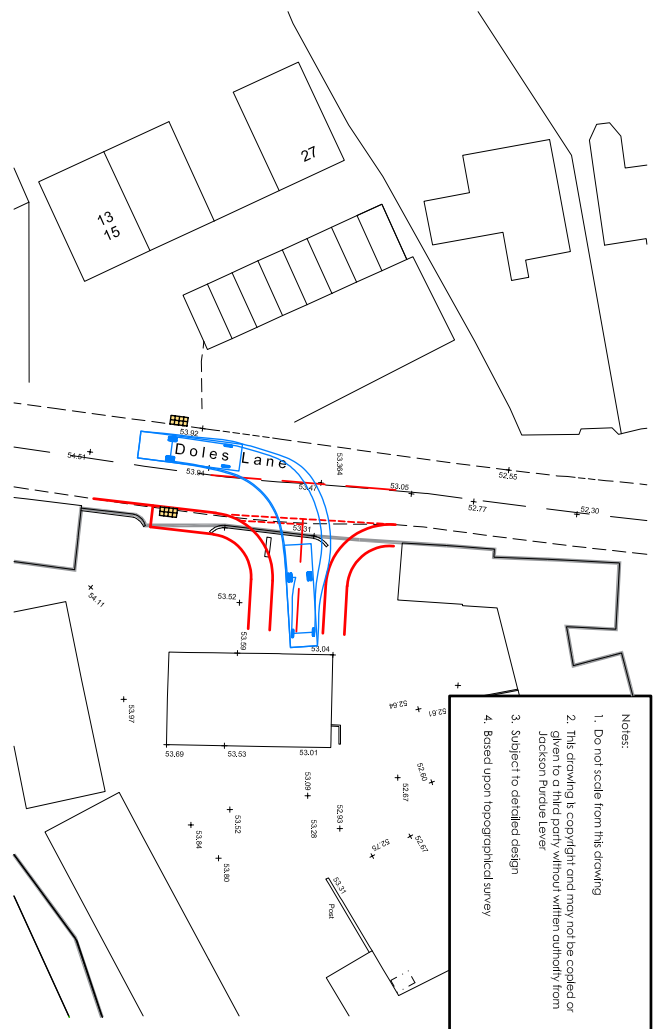
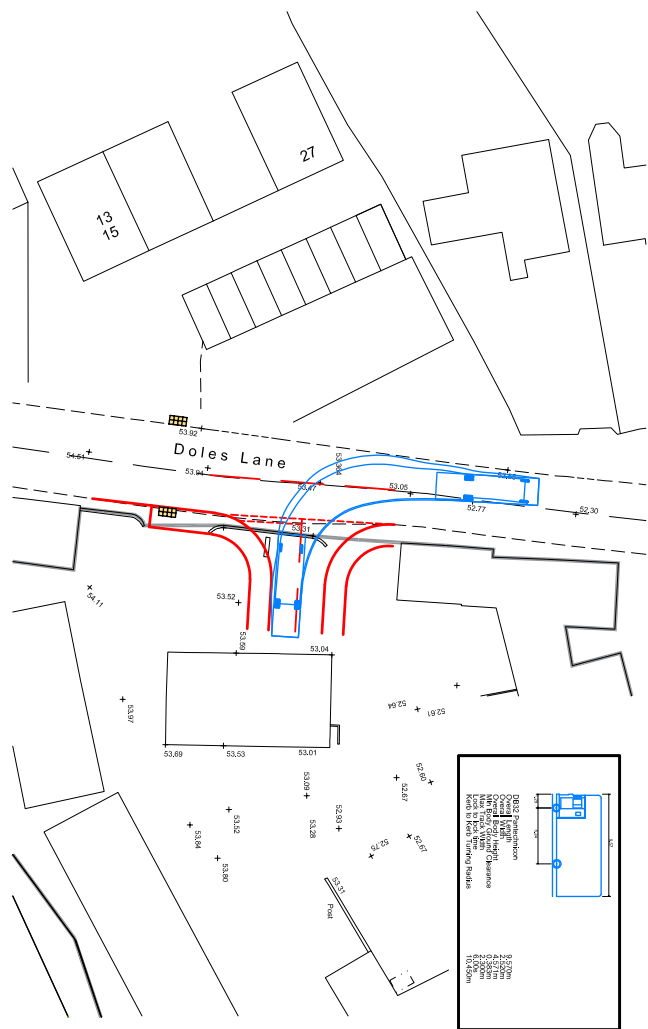
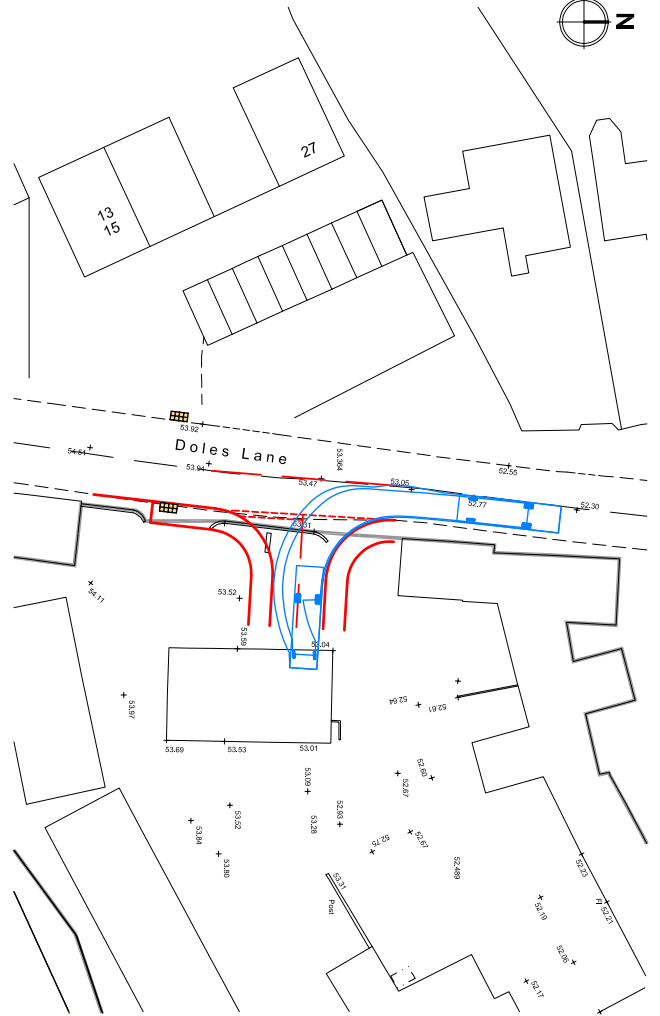
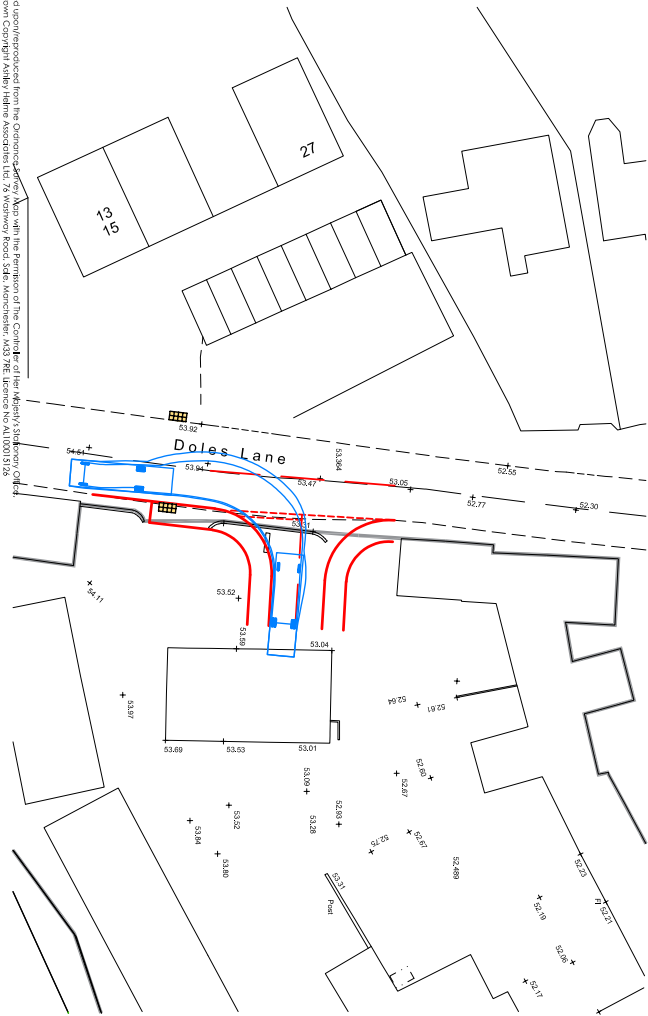


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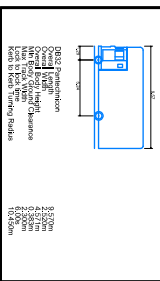
- Key:
- 2.4m x 48m visibility splay
 - Existing road markings
 - Proposed kerbline
 - Proposed road markings
 - Tactile Paving

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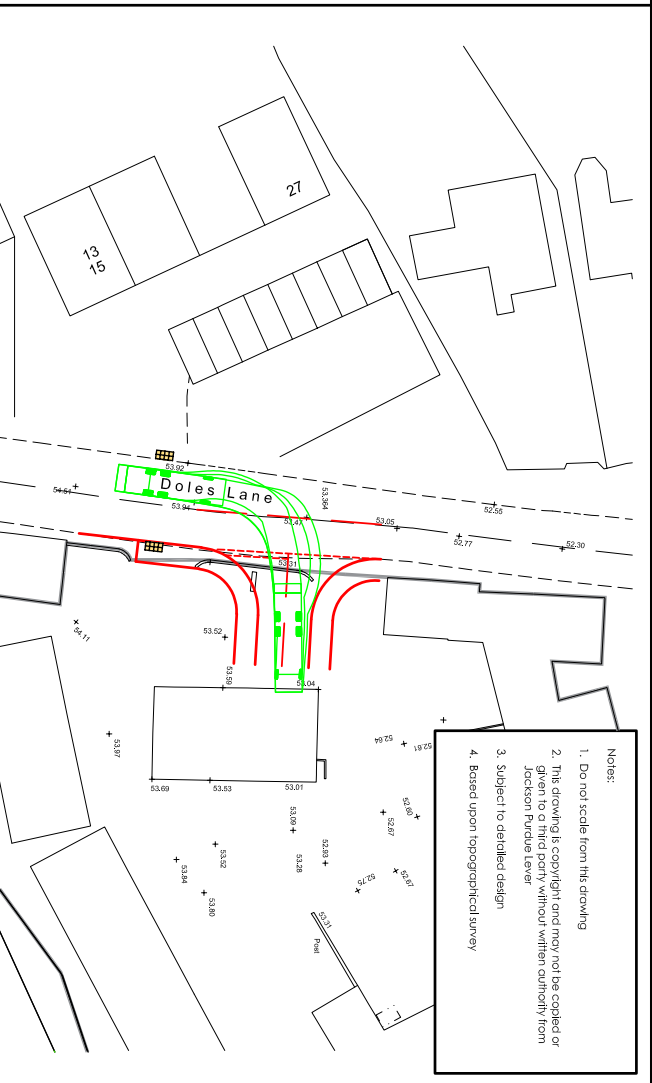
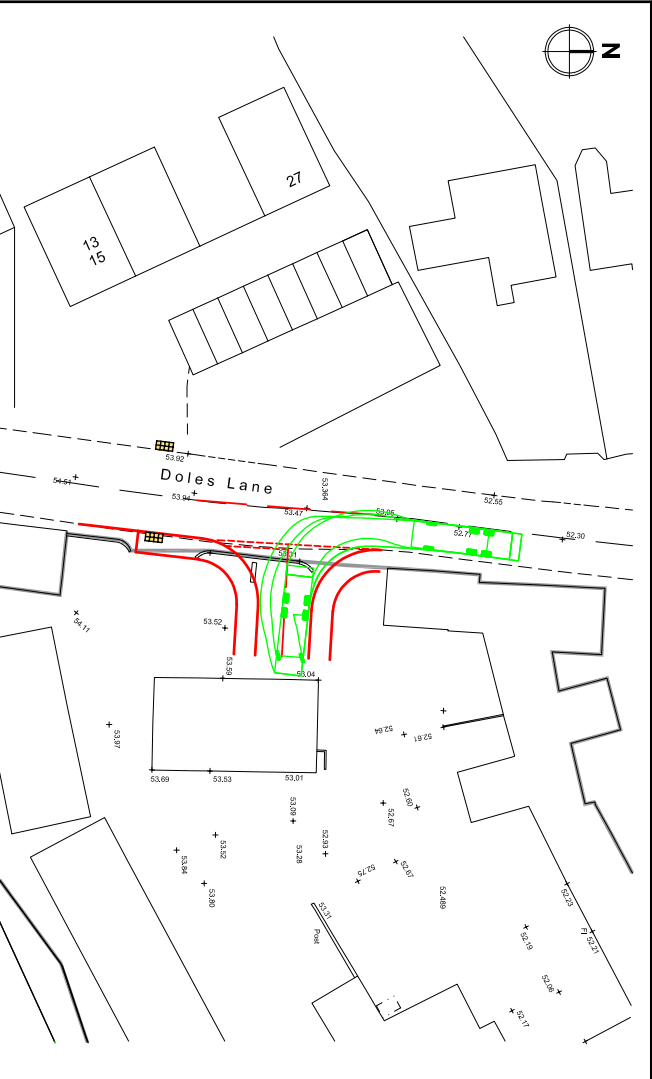
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Title	PROPOSED ACCESS ARRANGEMENTS	Date	FEB 2021	Scale	1:500 @ A4		



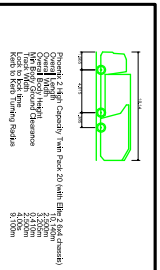
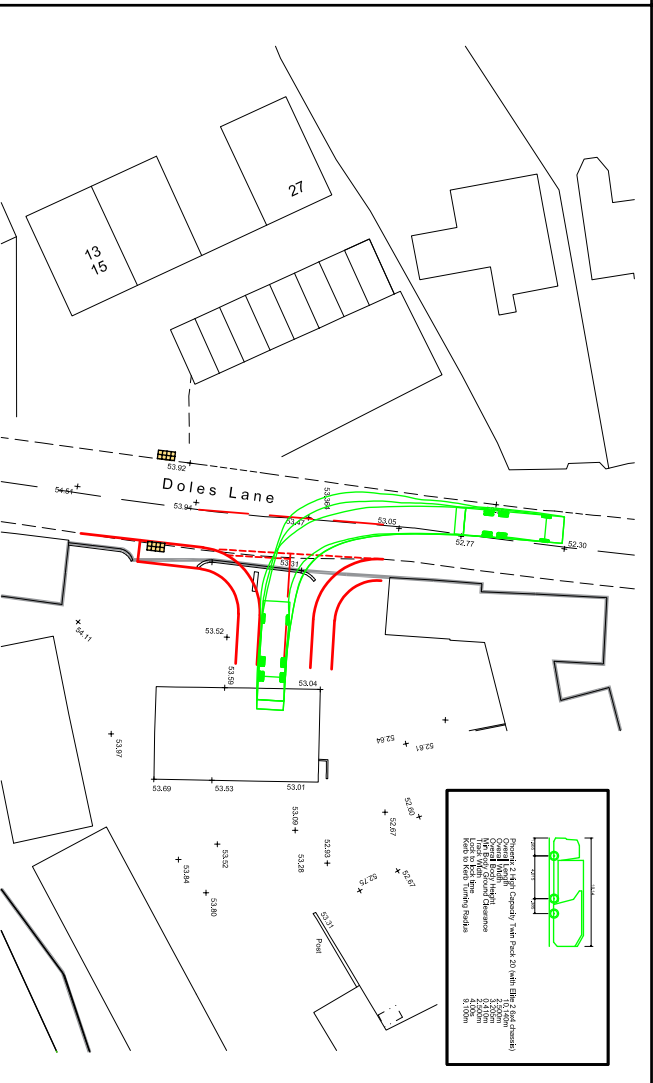
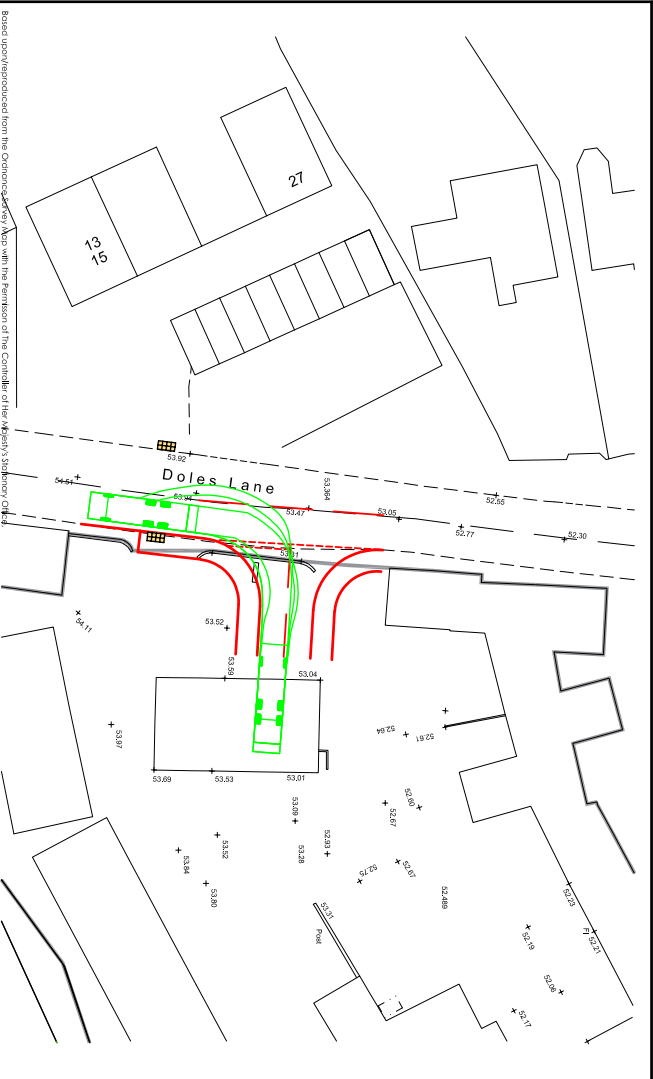
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Project		Title	
DOLES LANE, FINDERN		SWEPT PATH ANALYSIS: PANTCHINCON	
Client		Drawing No	
STANTON DEVELOPMENTS		1739/SP/01	
		Date	Rev
		FEBRUARY 2021	A
		Scale	
		1:500@A3	



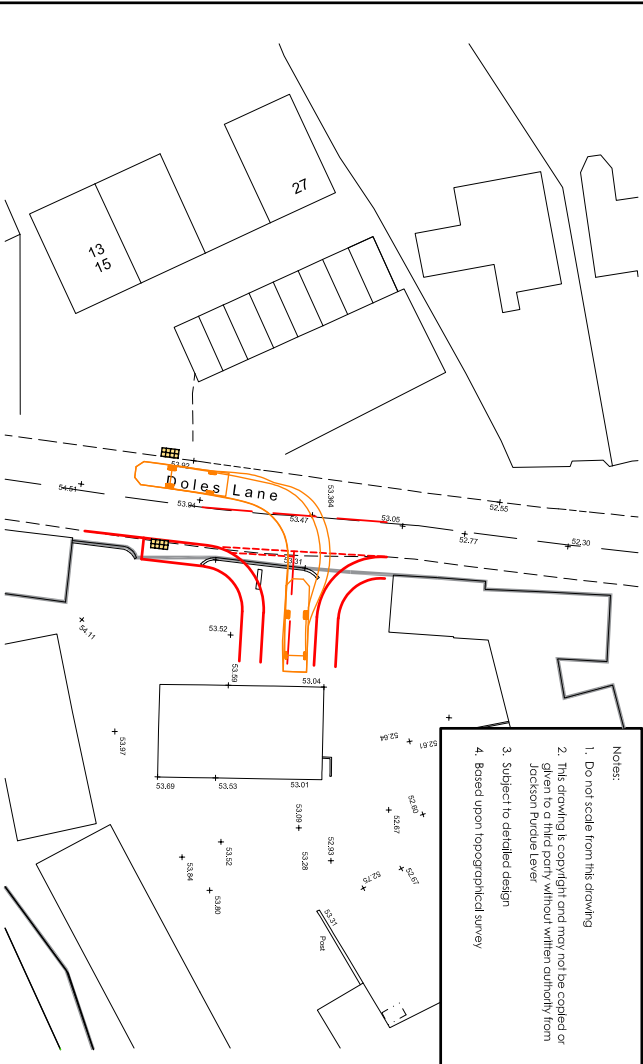
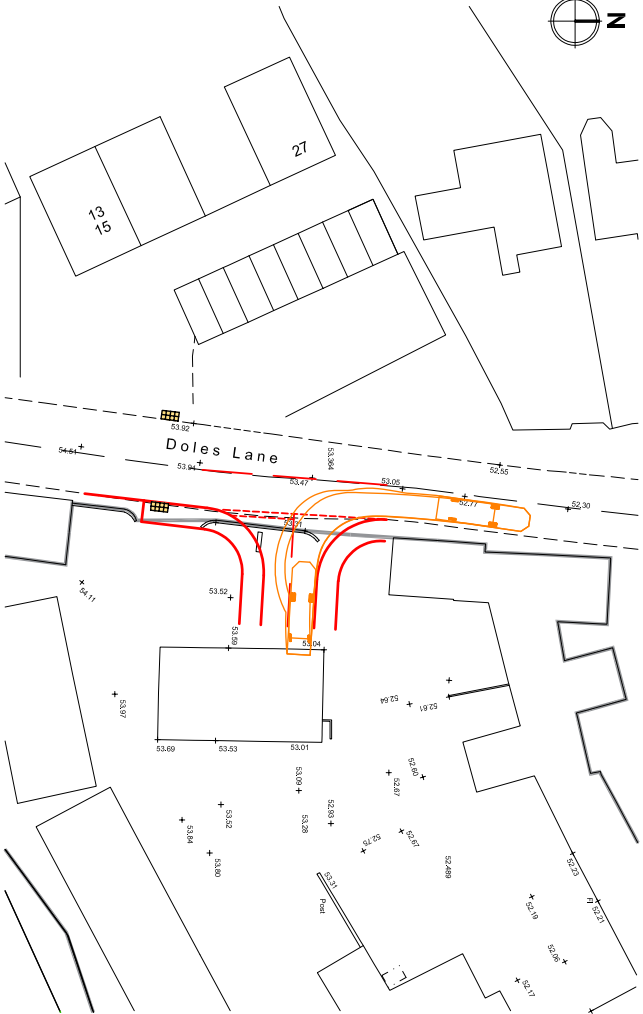
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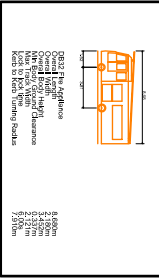
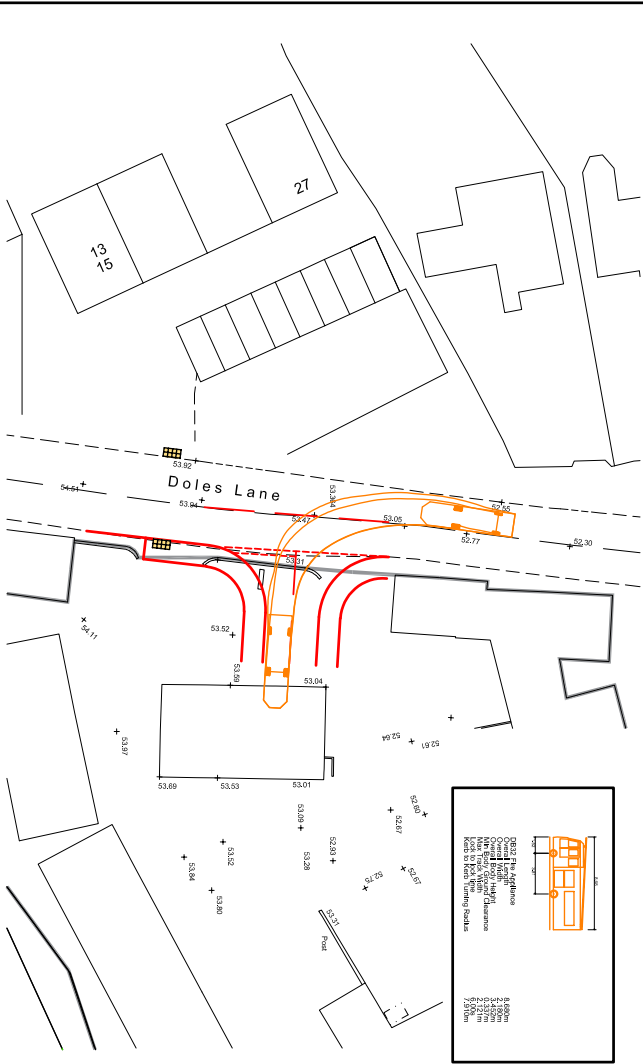
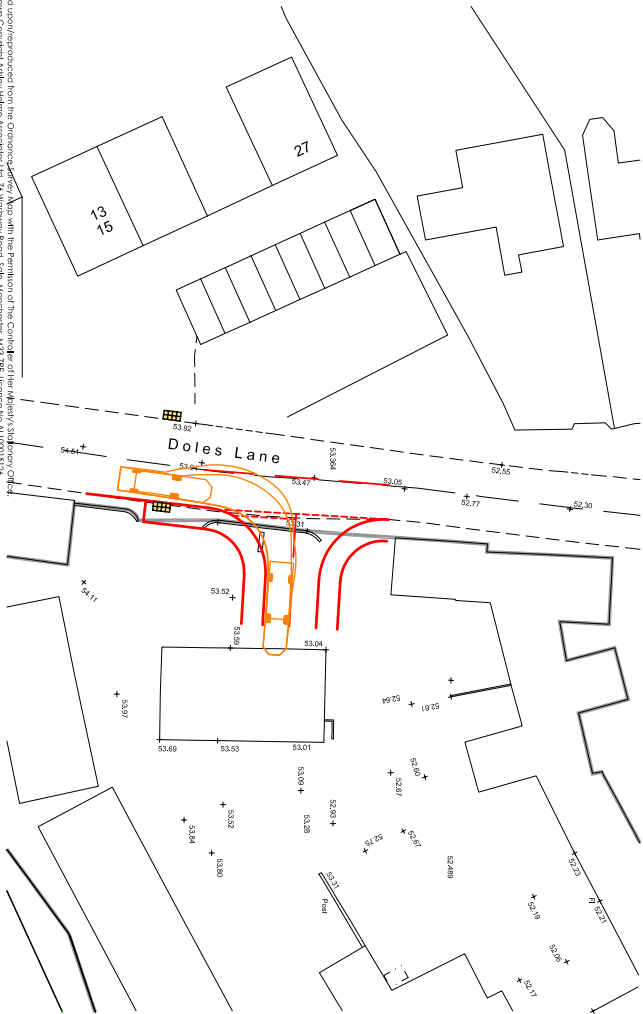
Proposed 2.5m Refuse Vehicle
Refuse Vehicle Dimensions
Length: 10.0m
Width: 2.5m
Height: 2.0m
Wheelbase: 4.0m
Turning Radius: 10.0m

Project	DOLES LANE, FINDERN		Title	SWEEP PATH ANALYSIS: REFUSE VEHICLE	
Client	STANTON DEVELOPMENTS		Drawing No	1739/SP/02	Rev
			Date	FEBRUARY 2021	Scale
					1:500@A3





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Project DOLES LANE, HINDERN

Client STANTON DEVELOPMENTS

Title SWEPT PATH ANALYSIS: FIRE APPLIANCE

Drawing No 1739/SP/03

Date FEBRUARY 2021

Rev A

Scale 1:500@A3

Jackson purdue lever



APPENDIX A: TRICS DATA

Calculation Reference: AUDIT-733101-210210-0203

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
 Category : A - HOUSES PRIVATELY OWNED

TOTAL VEHICLESSelected regions and areas:

04	EAST ANGLIA	
	NF NORFOLK	2 days
	SF SUFFOLK	1 days
05	EAST MIDLANDS	
	LN LINCOLNSHIRE	1 days
06	WEST MIDLANDS	
	WK WARWICKSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	NY NORTH YORKSHIRE	3 days
08	NORTH WEST	
	CH CHESHIRE	3 days
	MS MERSEYSIDE	1 days
09	NORTH	
	TW TYNE & WEAR	1 days
10	WALES	
	VG VALE OF GLAMORGAN	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Primary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: No of Dwellings
 Actual Range: 10 to 24 (units:)
 Range Selected by User: 8 to 24 (units:)

Parking Spaces Range: All Surveys Included

Parking Spaces per Dwelling Range: All Surveys Included

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/12 to 09/09/20

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Monday	4 days
Tuesday	2 days
Wednesday	6 days
Thursday	1 days
Friday	1 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	13 days
Directional ATC Count	1 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaken using machines.

Selected Locations:

Suburban Area (PPS6 Out of Centre)	8
Edge of Town	6

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Residential Zone	14
------------------	----

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories

Secondary Filtering selection:Use Class:

C3

14 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 500m Range:

All Surveys Included

Population within 1 mile:

1,001 to 5,000	2 days
5,001 to 10,000	3 days
10,001 to 15,000	5 days
15,001 to 20,000	3 days
25,001 to 50,000	1 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

5,001 to 25,000	1 days
25,001 to 50,000	2 days
50,001 to 75,000	3 days
75,001 to 100,000	2 days
100,001 to 125,000	1 days
125,001 to 250,000	2 days
250,001 to 500,000	3 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0	8 days
1.1 to 1.5	6 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

Yes	1 days
No	13 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present	14 days
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This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1	CH-03-A-08	DETACHED		CHESHIRE
	WHITCHURCH ROAD			
	CHESTER			
	BOUGHTON HEATH			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total No of Dwellings:	11		
	Survey date: TUESDAY	22/05/12		Survey Type: MANUAL
2	CH-03-A-09	TERRACED HOUSES		CHESHIRE
	GREYSTOKE ROAD			
	MACCLESFIELD			
	HURDSFIELD			
	Edge of Town			
	Residential Zone			
	Total No of Dwellings:	24		
	Survey date: MONDAY	24/11/14		Survey Type: MANUAL
3	CH-03-A-11	TOWN HOUSES		CHESHIRE
	LONDON ROAD			
	NORTHWICH			
	LEFTWICH			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total No of Dwellings:	24		
	Survey date: THURSDAY	06/06/19		Survey Type: MANUAL
4	LN-03-A-03	SEMI DETACHED		LINCOLNSHIRE
	ROOKERY LANE			
	LINCOLN			
	BOULTHAM			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total No of Dwellings:	22		
	Survey date: TUESDAY	18/09/12		Survey Type: MANUAL
5	MS-03-A-03	DETACHED		MERSEYSIDE
	BEMPTON ROAD			
	LIVERPOOL			
	OTTERSPOOL			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total No of Dwellings:	15		
	Survey date: FRIDAY	21/06/13		Survey Type: MANUAL
6	NF-03-A-03	DETACHED HOUSES		NORFOLK
	HALING WAY			
	THETFORD			
	Edge of Town			
	Residential Zone			
	Total No of Dwellings:	10		
	Survey date: WEDNESDAY	16/09/15		Survey Type: MANUAL
7	NF-03-A-10	MIXED HOUSES & FLATS		NORFOLK
	HUNSTANTON ROAD			
	HUNSTANTON			
	Edge of Town			
	Residential Zone			
	Total No of Dwellings:	17		
	Survey date: WEDNESDAY	12/09/18		Survey Type: DIRECTIONAL ATC COUNT
8	NY-03-A-08	TERRACED HOUSES		NORTH YORKSHIRE
	NICHOLAS STREET			
	YORK			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total No of Dwellings:	21		
	Survey date: MONDAY	16/09/13		Survey Type: MANUAL
9	NY-03-A-11	PRIVATE HOUSING		NORTH YORKSHIRE
	HORSEFAIR			
	BOROUGHBRIDGE			
	Edge of Town			
	Residential Zone			
	Total No of Dwellings:	23		
	Survey date: WEDNESDAY	18/09/13		Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

10	NY-03-A-13	TERRACED HOUSES	NORTH YORKSHIRE
	CATTERICK ROAD		
	CATTERICK GARRISON		
	OLD HOSPITAL COMPOUND		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total No of Dwellings:	10	
	Survey date: WEDNESDAY	10/05/17	Survey Type: MANUAL
11	SF-03-A-05	DETACHED HOUSES	SUFFOLK
	VALE LANE		
	BURY ST EDMUNDS		
	Edge of Town		
	Residential Zone		
	Total No of Dwellings:	18	
	Survey date: WEDNESDAY	09/09/15	Survey Type: MANUAL
12	TW-03-A-02	SEMI-DETACHED	TYNE & WEAR
	WEST PARK ROAD		
	GATESHEAD		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total No of Dwellings:	16	
	Survey date: MONDAY	07/10/13	Survey Type: MANUAL
13	VG-03-A-01	SEMI-DETACHED & TERRACED	VALE OF GLAMORGAN
	ARTHUR STREET		
	BARRY		
	Edge of Town		
	Residential Zone		
	Total No of Dwellings:	12	
	Survey date: MONDAY	08/05/17	Survey Type: MANUAL
14	WK-03-A-03	DETACHED HOUSES	WARWICKSHIRE
	BRESE AVENUE		
	WARWICK		
	GUY'S CLIFFE		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total No of Dwellings:	23	
	Survey date: WEDNESDAY	25/09/19	Survey Type: MANUAL

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
SH-03-A-06	bungalows
WK-03-A-02	bungalows

ASHLEY HELME ASSOCIATES 76 WSHWAY ROAD SALE

Licence No: 733101

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

TOTAL VEHICLES**Calculation factor: 1 DWELLS****BOLD print indicates peak (busiest) period**

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	14	18	0.077	14	18	0.317	14	18	0.394
08:00 - 09:00	14	18	0.142	14	18	0.419	14	18	0.561
09:00 - 10:00	14	18	0.138	14	18	0.167	14	18	0.305
10:00 - 11:00	14	18	0.154	14	18	0.154	14	18	0.308
11:00 - 12:00	14	18	0.159	14	18	0.179	14	18	0.338
12:00 - 13:00	14	18	0.207	14	18	0.191	14	18	0.398
13:00 - 14:00	14	18	0.154	14	18	0.154	14	18	0.308
14:00 - 15:00	14	18	0.171	14	18	0.191	14	18	0.362
15:00 - 16:00	14	18	0.256	14	18	0.211	14	18	0.467
16:00 - 17:00	14	18	0.240	14	18	0.142	14	18	0.382
17:00 - 18:00	14	18	0.337	14	18	0.150	14	18	0.487
18:00 - 19:00	14	18	0.289	14	18	0.175	14	18	0.464
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.324			2.450			4.774

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

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Parameter summary

Trip rate parameter range selected:	10 - 24 (units:)
Survey date range:	01/01/12 - 09/09/20
Number of weekdays (Monday-Friday):	14
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	2

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Calculation Reference: AUDIT-733101-210201-0249

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 15 - VEHICLE SERVICES
 Category : A - VEHICLE REPAIR GARAGE (SLOW FIT)

TOTAL VEHICLESSelected regions and areas:

02	SOUTH EAST	
	HF	HERTFORDSHIRE 1 days
	WN	WINDSOR & MAIDENHEAD 1 days
04	EAST ANGLIA	
	CA	CAMBRIDGESHIRE 1 days
09	NORTH	
	TW	TYNE & WEAR 1 days
11	SCOTLAND	
	AD	ABERDEEN CITY 1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Primary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: Gross floor area
 Actual Range: 136 to 900 (units: sqm)
 Range Selected by User: 136 to 5100 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/12 to 28/06/19

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Monday	1 days
Tuesday	1 days
Friday	3 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	5 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaken using machines.

Selected Locations:

Suburban Area (PPS6 Out of Centre)	2
Edge of Town	3

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Industrial Zone	4
Residential Zone	1

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Secondary Filtering selection:Use Class:

n/a	2 days
Not Known	3 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 500m Range:

All Surveys Included

Population within 1 mile:

5,001 to 10,000	1 days
10,001 to 15,000	1 days
15,001 to 20,000	2 days
25,001 to 50,000	1 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

125,001 to 250,000	4 days
250,001 to 500,000	1 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0	2 days
1.1 to 1.5	3 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

No	5 days
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This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present	5 days
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This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1	AD-15-A-01	GARAGE	ABERDEEN CITY
	12 WAVERLY PLACE		
	ABERDEEN		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Gross floor area:	136 sqm	
	Survey date: MONDAY	21/05/12	Survey Type: MANUAL
2	CA-15-A-01	GARAGE	CAMBRIDGESHIRE
	FENGATE		
	PETERBOROUGH		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	900 sqm	
	Survey date: TUESDAY	16/10/12	Survey Type: MANUAL
3	HF-15-A-01	GARAGE	HERTFORDSHIRE
	LEYDEN ROAD		
	STEVENAGE		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	290 sqm	
	Survey date: FRIDAY	28/06/19	Survey Type: MANUAL
4	TW-15-A-01	COMMERCIAL VEHICLE GARAGE	TYNE & WEAR
	HENDON STREET		
	SUNDERLAND		
	HENDON		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	400 sqm	
	Survey date: FRIDAY	24/05/19	Survey Type: MANUAL
5	WN-15-A-01	GARAGE	WINDSOR & MAIDENHEAD
	CORDWALLIS STREET		
	MAIDENHEAD		
	Suburban Area (PPS6 Out of Centre)		
	Industrial Zone		
	Total Gross floor area:	580 sqm	
	Survey date: FRIDAY	23/11/12	Survey Type: MANUAL

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

ASHLEY HELME ASSOCIATES 76 WSHWAY ROAD SALE

Licence No: 733101

TRIP RATE for Land Use 15 - VEHICLE SERVICES/A - VEHICLE REPAIR GARAGE (SLOW FIT)

TOTAL VEHICLES**Calculation factor: 100 sqm****BOLD print indicates peak (busiest) period**

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	1	400	0.250	1	400	0.000	1	400	0.250
07:00 - 08:00	5	461	0.477	5	461	0.087	5	461	0.564
08:00 - 09:00	5	461	1.388	5	461	0.564	5	461	1.952
09:00 - 10:00	5	461	1.605	5	461	1.388	5	461	2.993
10:00 - 11:00	5	461	0.997	5	461	0.650	5	461	1.647
11:00 - 12:00	5	461	1.127	5	461	0.867	5	461	1.994
12:00 - 13:00	5	461	0.867	5	461	0.954	5	461	1.821
13:00 - 14:00	5	461	0.954	5	461	1.127	5	461	2.081
14:00 - 15:00	5	461	0.867	5	461	1.084	5	461	1.951
15:00 - 16:00	5	461	0.564	5	461	0.737	5	461	1.301
16:00 - 17:00	5	461	0.650	5	461	1.214	5	461	1.864
17:00 - 18:00	5	461	0.520	5	461	1.214	5	461	1.734
18:00 - 19:00	5	461	0.043	5	461	0.260	5	461	0.303
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			10.309			10.146			20.455

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

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Parameter summary

Trip rate parameter range selected:	136 - 900 (units: sqm)
Survey date range:	01/01/12 - 28/06/19
Number of weekdays (Monday-Friday):	5
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.