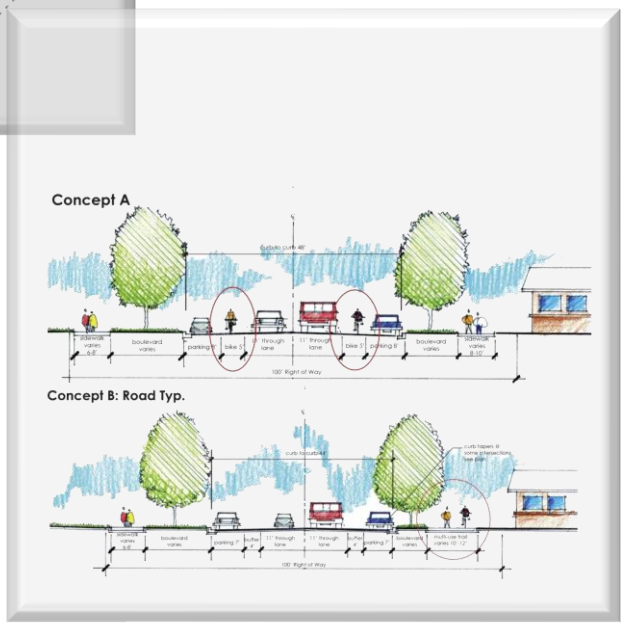
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Transport Statement

Proposed 41 Dwelling Residential Development

Nanny Marr Road, Darfield

Barnsley, South Yorkshire

Creative Minds, *Intelligent Thinking*

SECTION	CONTENTS	PAGE
	Executive Summary	4
1.0	Introduction	6
2.0	Scoping Study	8
3.0	Baseline Assessment	9
4.0	Development Assessment	18
5.0	Development Impact & Mitigation	26
6.0	Summary & Conclusions	31
	Glossary	32

APPENDIX	CONTENTS	PAGE
A	*Technical References*	*33*
1.0	Transport Policy & Site Location	48
2.0	Development Layout	52
3.0	Walk Isochrones	53
4.0	Cycle Isochrones	54
5.0	TRICS	55

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i. iTransport Planning, a specialist division of iPRT© Group of companies, has been commissioned by the Applicant to prepare a Transport Statement Study (Study) for the proposed 41 residential units on the land to the east of the B6096 Nanny Marr Road, Darfield, Barnsley, google maps link https://bit.ly/2BlX1uu

ii. The Application site is in a sustainable location; local amenities are accessible by walking, cycling and public transport hence, the development proposals are in line with the relevant national, regional and local transport policies and in particular the National Planning Policy Framework [NPPF] presumption in favour of sustainable development.

iii. With the exception of the forthcoming retail store in the immediate vicinity of the site, there are no known committed developments or highway network changes that may have an impact on the findings of this Study.

iv. It is anticipated that the development would attract the usual servicing requirements. The design and layout will allow for all movements and turning points to be accommodated within the site.

v. Car and cycle parking will be provided having regards to Barnsley MBC (BMBC) Supplementary Planning Document 2013, Parking.

vi. All personal injury collisions (PICs) are regrettable; review of the PICs in the vicinity of the site for the most recent 5 years period indicated that there there does not appear to be any discernible patterns to collisions at any of the junctions or carriageways in the vicinity of the proposed development. There are no apparent collisions issue in the area that would affect, or be affected by, the proposed development.

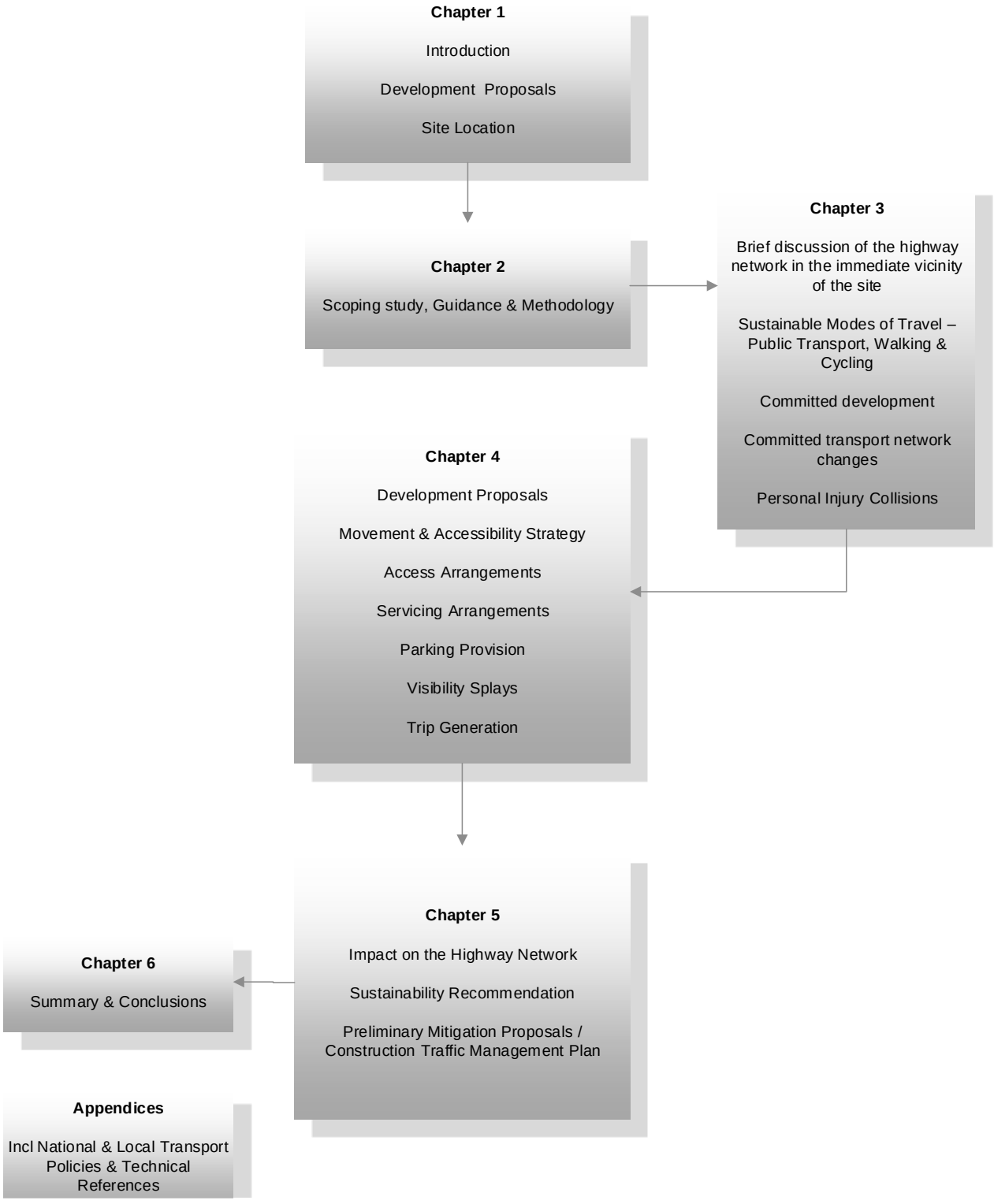
vii. A Welcome Pack is recommended to promote and enhance the site's accessibility and sustainability and minimise the impact on the adjoining roads network (if any).

viii. Detailed analysis indicates that the proposed development may generate a maximum of 35 and 32 movements / two-way trips from two different access points in the AM/PM peak hours respectively. The detailed analysis and impact assessment have demonstrated that:

- The proposed access arrangements would adequately meet the operational demands of the development and introduce improved highway safety;
- The highway network is adequate to support the vehicle movements for the proposed development, so as not to be detrimental to highway safety of road users; and
- The development does not result in an unacceptable impact on highway safety or a residual cumulative impact on the road network that is severe and thus should not be refused on transport grounds, as set out in paragraph 109 of the Revised NPPF.

ix. It is concluded that the proposed development meets all safety and Planning Policy requirements and will have no material impact onto the highway network and as such, there are no transport / highways reasons for refusal of planning permission.

ROAD MAP AND CONTENTS OF THIS STUDY



1.1 iTransport Planning, a specialist division of iPRT© Group of companies, has been commissioned by the Applicant to prepare a Transport Statement Study (Study) for the proposed 41 residential units on the land to the east of the B6096 Nanny Marr Road, Darfield, Barnsley, google maps link https://bit.ly/2BIX1uu



AFFORABLE HOUSIN				
CODE	TYPE	NO	Type %	SQM
F114	2 BED 4P	8	22.86	72.6
F113	3 BED 5P	4	11.43	84.3
F112	3 BED 5P	20	57.14	83.7
F115	3 BED 5P	3	8.57	85.6
		35	100.00	
OPEN MARKET SAL				
CODE	TYPE	NO	Type %	SQM
F112	3 BED 5P	6	100.00	83.7
		6	100.00	

Figure 1.1
Illustrative layout

SITE LOCATION

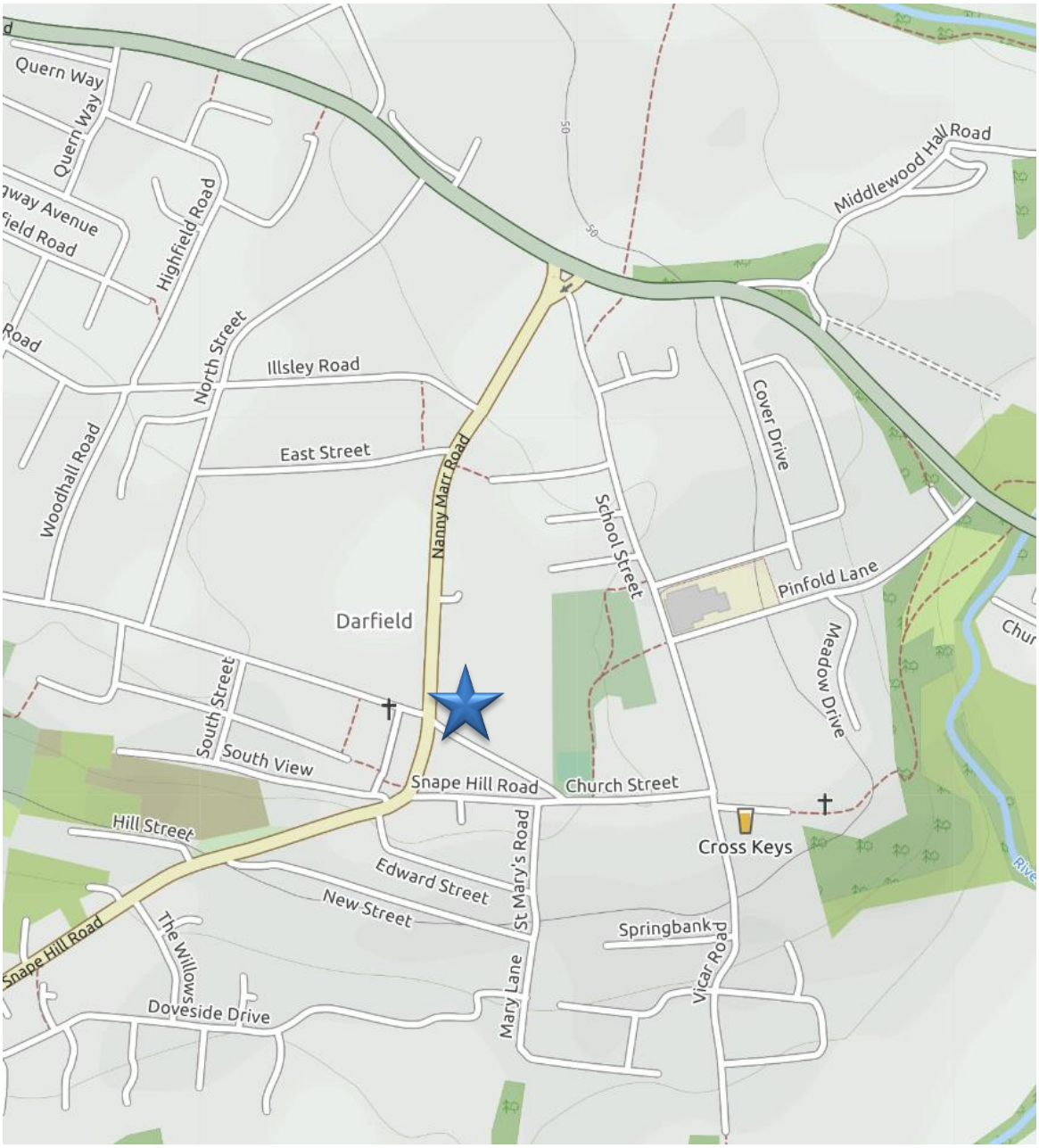


Figure 1.2
Illustrative *site location*
https://bit.ly/2BlX1uu

2.1 The following is included as part of the Study:

- High-level review of the existing highway conditions;
- Development proposals, servicing arrangements, site connectivity and sustainability;
- Development impact on the adjoining roads network;
- Site access proposals;
- Car and Cycle Parking provision; and
- Consideration of any committed developments and associated highway network changes in the immediate vicinity of the site.

REFERENCES, GUIDELINES & METHODOLOGY

2.2 Technical References and backup information are included in Appendix A.

2.3 Where relevant, the Study will be in line with:

- Transport Evidence Bases in Plan Making and Decision Taking; and
- Travel plans, transport assessments and statements in decision-taking and their predecessors
    - "Guidance on Transport Assessment" produced in March 2007 by the Department for Transport;
    - "Good Practice Guidelines: delivering Travel Plans through the Planning Process" published in April 2009, by the Department for Transport [where relevant];
- DMRB - Design Manual for Roads and Bridges [where relevant];
- Manual for Streets [MfS] 1 & 2;
- National Transport Policy;
- National Planning Policy Framework [NPPF];
- BMBC SPD 2012 – Parking;
- BMBC SPD Designing New Housing Development 2012; and
- South Yorkshire Residential Design Guide 2011.

NANNY MARR ROAD

Note: *All dimensions, descriptions and speeds are approximate and may not apply to the entire length of the carriageway. All images are for illustration puposes only*



Figure 3.1
Nanny Marr Road

FOOTWAYS CONTINUITY

















Figure 3.2
Footways continuity

EXISTING SUSTAINABLE MODES OF TRAVEL

Bus Services

3.1 Taking into consideration the technical references and analysis undertaken in Appendix A of this Study (section A4), the site is accessible by public transport with bus stops in the immediate vicinity of the site and well within 300m (actual walking distances). Bus stop locations are illustrated in Figure 3.3 with a summary of the bus services included in Figure 3.4. Full timetables are found at https://bustimes.org/localities/darfield or https://www.travelsouthyorkshire.com/timetablefinder.aspx

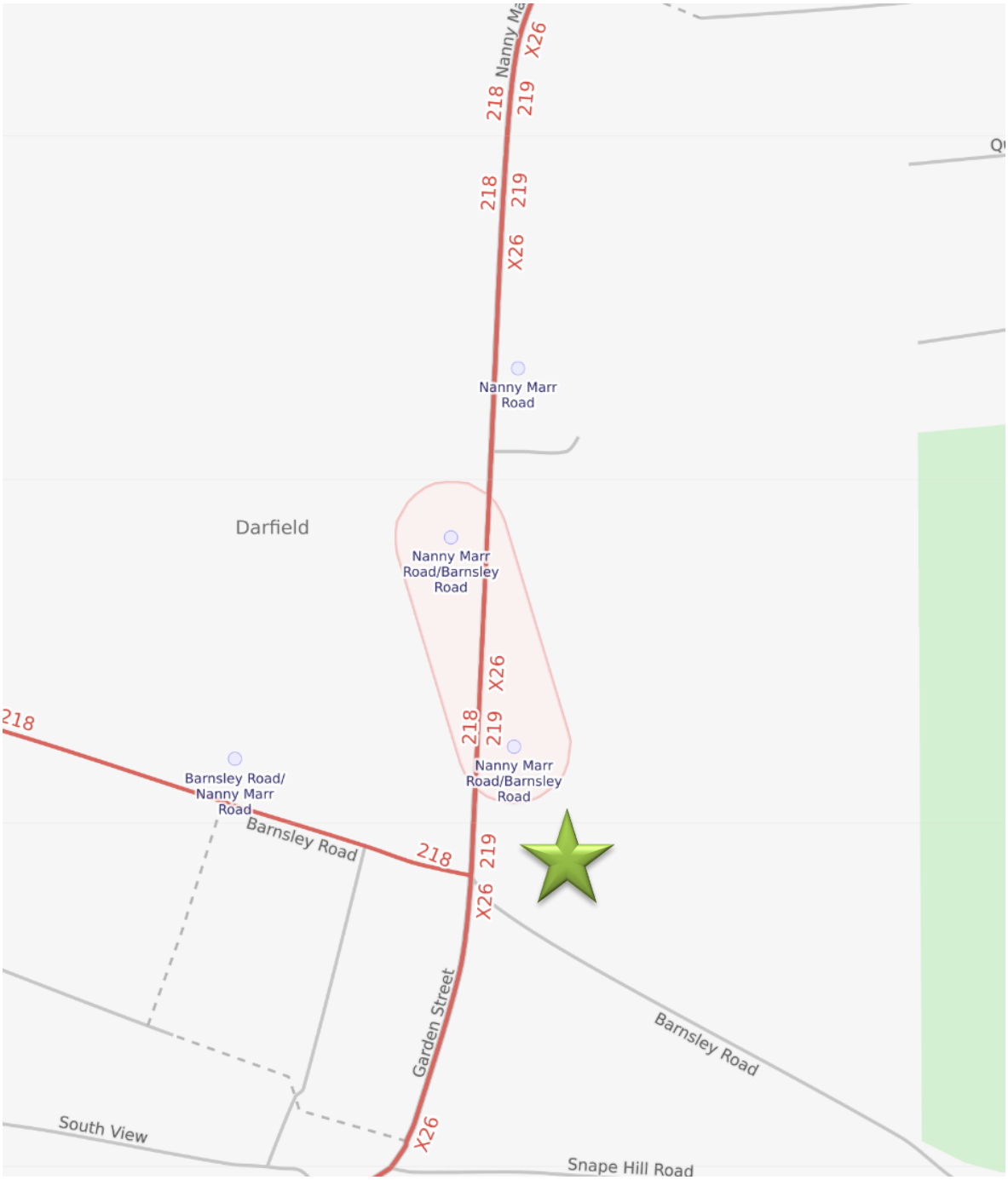
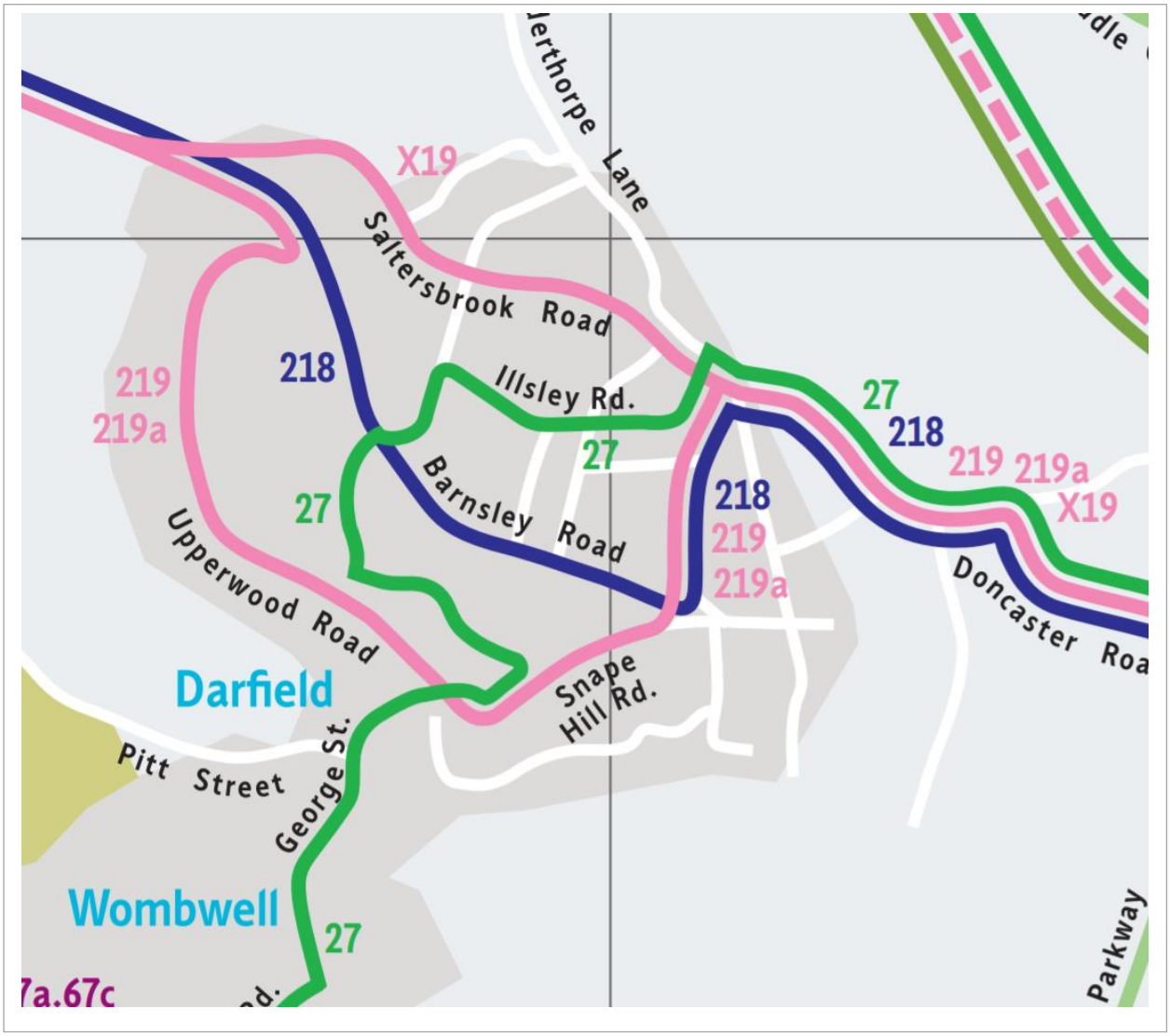


Figure 3.3
Bus stop location & corresponding services



service number	route	buses run every (mins) MON-SAT daytime	SUN daytime	ALL eves	NOTES
27 Stagecoach	Barnsley – Grimethorpe – Darfield – Wombwell	2 journeys/hour	2 journeys/hour	60	60	
218	Barnsley - Stairfoot - Darfield - Goldthorpe - Bolton - Manvers - Mexbrough - Swinton Kilnhurst - Rawmarsh - Rotherham	30	60	60	–
219/219A	Barnsley - Darfield - Great Houghton - Merrill Road, Thurnscoe (219) or Windsor Street, Thurnscoe (219A) - Goldthorpe - Harlington - High Melton - Sprotbrough - Doncaster	30 (Combined)	60 (219)	60 (219)	–
X19	Barnsley - Stairfoot - Darfield - Goldthorpe - Scawsby - Doncaster - Robin Hood Airport	30	60	60	g

g Monday-Saturday daytime operates every 30 minutes Barnsley and Doncaster and 60 minutes Barnsley and Robin Hood Airport. Sunday daytime operates between Barnsley and Doncaster. No Sunday evening service.

Figure 3.4
Summary of bus timetables

3.2 Bus services 448 / 449 (Netherwood Academy) and 481 / 482a (Barnsley Academy) both stop in the immediate vicinity of the site and are bus services

Car Sharing

3.3 Liftshare is a community car club. The programme allows residents to sign up and view any car sharing opportunities in their area. This will allow some staff / commuters travelling by car to potentially car share with others residing in Darfield, Barnsley and other nearby towns and villages https://liftshare.com/uk

NON-MOTORISED ACCESSIBILITY

3.4 The government wants cycling and walking to become the norm by 2040 and will target funding at innovative ways to encourage people onto a bike or to use their own two feet for shorter journeys *[DfT Cycling & Walking Investment Strategy, Appendix A, Technical References]*.

Walking

3.5 Walking is generally considered a viable travel choice up to 2000 metres (25 mins) where short journeys are required [Appendix A, Figure h]. The 400m, 800m and 2km isochrones are attached in Appendices 3 & 4.

3.6 There are existing footways on both sides of Nanny Marr Road and generally throughout the adjoining roads network.

3.7 As such, consideration has been given to the existing amenities within walking (2km) and cycling (5km) distance from the proposed development:

3.8 As such, consideration has been given to the existing walking facilities within…

800m

- Public Transport
- Darfield All Saints CoE Primary — School St
- Darfield Valley Primary — Snap Hill Rd
- Darfield All Saints Childrens Recreation Centre — School St
- Amys Fish Shop — School St
- The Darfield Public House — Illsley Rd
- Darfield Community Centre — Illsley Rd
- Darfield Post Office — Garden St

- Whites bakers — Garden St
- Garden St Dental Practice — Garden St
- Rhythm & Booze Off Licence — Garden St
- GT Convenience Store — Snap Hill Rd
- Hairdressers — Snap Hill Rd
- Café — Snap Hill Rd
- Co-op Pharmacy — Church St
- Garland House Surgery — Church St
- All Saints Church — Church St

1km

- Darfield Upperwood Primary — Barnsley Rd

3.9 As shown in Figures 3.2 – 3.3, footways are generally continuous throughout the adjoining roads network with pedestrian crossings where necessary and street lighting. The footways' surfaces appear to be in good condition and from site observations, as well as Personal Injury Incidents analysis, the road network appears to be safe for pedestrians.

3.10 Therefore, in view of the range and quality of facilities and amenities available to pedestrians in proximity to the site, it is considered that the site is accessible by walking and offers significant opportunities for access on foot.

Cycling

3.11 It has been widely acknowledged that cycling has the potential to substitute for short car trips, particularly those under 5km and to form part of a longer journey by public transport. The 2km [10 mins cycling] and 5km [25 mins cycling] isochrones are included in Appendix 4.

- The above referenced DfT Investment Strategy include specific objectives to double cycling, reduce cycling accidents and increase the proportion of 5 to 10 year-olds walking to school to 55% by 2025.

3.12 There are no formal local or national cycle routes in the immediate vicinity of the site however, National Route [NR] 62 leading to NR 67 is within 2.2km as shown in Figure 3.5. During a site visit, a number of cyclists were using the roads network and drivers are accustomed to their presence and courteous towards them, therefore, the local highway network appears to be safe for cyclists.

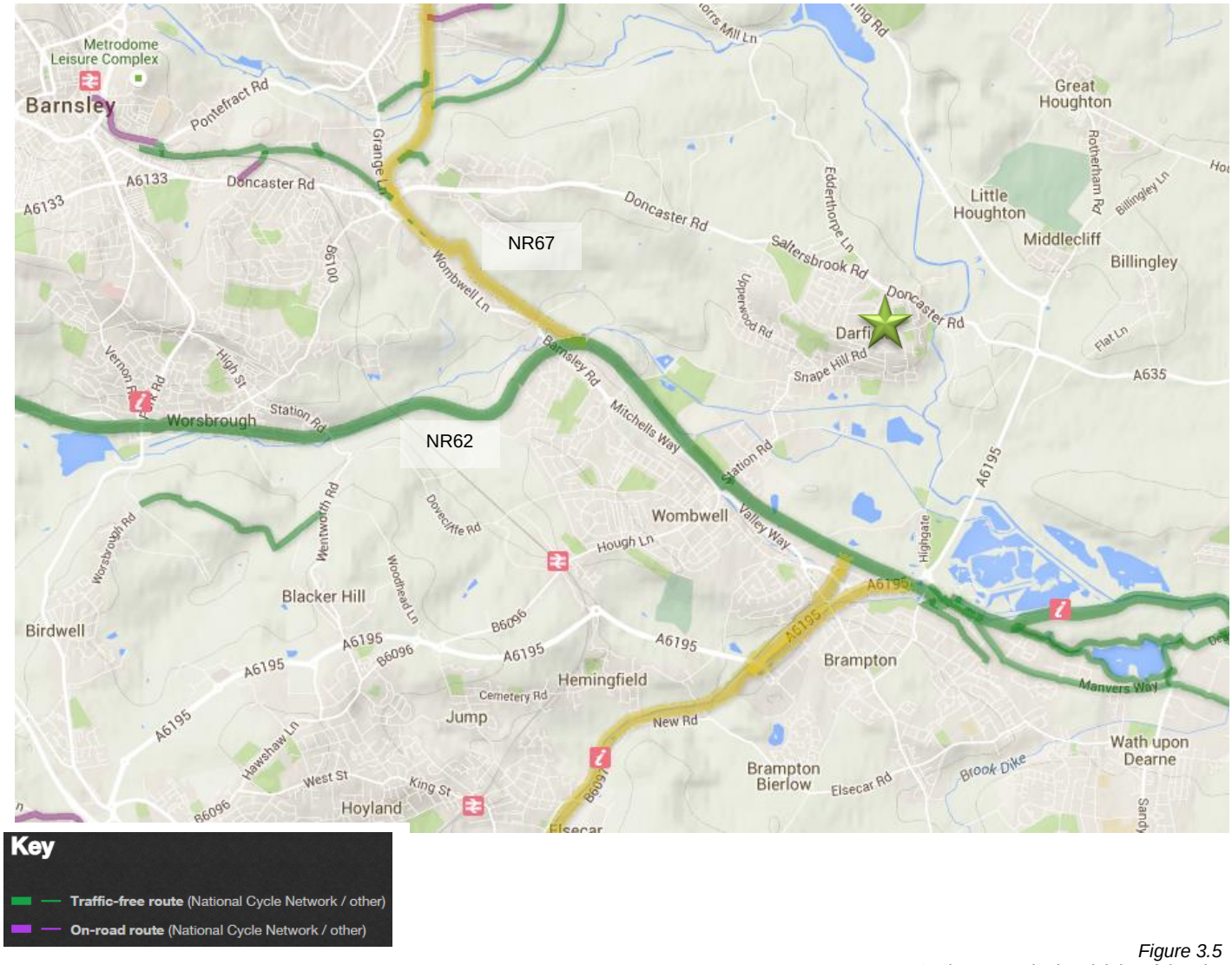


Figure 3.5
Cycle Routes in the vicinity of the site

- National Route 67 of the National Cycle Network runs from Long Whatton near Loughborough to join National Route 71 near Northallerton in Yorkshire. The stretch between Chesterfield and Leeds forms the main route of the Transpennine Trail (central).
- National Route 62 connects Fleetwood on the Fylde region of Lancashire with Selby in North Yorkshire. It forms the west and central sections of The Trans Pennine Trail which is a long-distance path running from coast to coast across northern England.

3.13 Therefore, in view of the range and quality of facilities and amenities available for cyclists within 5km from the site, it is considered that the site is accessible by cycle and offers significant opportunities for access by bicycle.

Accessibility Summary

3.14 In line with the national planning policy, it has also been demonstrated that the development proposal (situated in a sustainable location offering access by public transport, on foot and cycle to a range of services, facilities and leisure opportunities) fully accords with the objectives of the NPPF, which advices that in assessing and determining development proposals, local planning authorities should apply the presumption in favour of sustainable development.

COMMITTED DEVELOPMENTS AND HIGHWAY NETWORK CHANGES

3.15 It is understood that the land to the south west of the application site may be developed as food and non-food retail stores [approx. 1400m^2 each]. The Application site will share the same access as that of the retail development the design and configuration of which have been agreed with BMBC.

3.16 The analysis undertaken in Chapter 4 indicates that the application site will have no material impact on the highway network; in particular, when compared to food & non-food retail, the residential development will generate a fraction of the vehicular trips generated by a food / non-food stores.

3.17 The proposed stores will enhance the sustainability of the application site in that the vast majority if not all residential trips associated with food and non-food retail could be made on foot with the store being well within 100m from the middle of the residential site.

PERMITTED & POTENTIAL DEVELOPMENT TRAFFIC FLOWS

3.18 The application site appears to have been occupied by Darfield Foulstone School of Creative Arts, a comprehensive school which specialised in creative arts with approximately 900 pupils between the ages of 11 and 16 before closure.

3.19 In order to predict the vehicular trips associated with the permitted use, i.e. secondary school for 900 pupils, and the potential site use as food / non-food retail and residential site, TRICS was used and this will be discussed further in Chapter 4 however summarised as follows:

PROPOSED LAND USE	AM PEAK				PM PEAK			
	IN		OUT		IN		OUT	
	Trip Rate	Trips	Trip Rate	Trips	Trip Rate	Trips	Trip Rate	Trips
Secondary School 900 Pupils	0.172	155	0.117	105	0.015	14	0.023	21
Previously Permitted Use Trips	260				35			

*Food Store 1254m^2	1.727	31	0.818	14	6.818	85	7.000	88
*Non-food store 1644m^2		12		7		34		45
Peak hour trips	**64**				**252**			
***The trip rates were extracted from EJS Associates TA submitted in October 2014**								

Figure 3.6
Permitted & Potential Traffic Flows

PERSONAL INJURY INCIDENTS [PIIS]

3.20 In 2015, Partner Construction has submitted a an application for a similar residential development to the north of the Application site which undertook PIIs analysis for the period 2009-2015.

3.21 Since then, 3 Serious incidents took place, one at the junction of Nanny Marr Rd with Illsey Rd and two in the vicinity of Nanny Marr junction with Barnsley Rd;

- On 7th Jan 2015 at 17:37 in dark wet conditions a pedestrian crossed in the path of a moving vehicle at the junction of Barnsley Rd with Nanny Marr Rd;
- On 2nd October 2015 at 15:57 in fine dry daylight conditions a motorcyclist lost control of his vehicle on a straight road on the approach to the Barnsley Rd / Nanny Marr junction; and
- In the vicinity of Illsey Rd on 13th May 2017 at 07:30am in fine dry daylight conditions, a vehicle attempted to pass a moving bus from its offside and collided with a wall.

3.22 All PICs are regrettable. Having analysed the data, and taken into account the built environment in which they occurred, it can be reasonably concluded that collisions are not attributable to any particular design or other common occurrence so as to result in any requirements for mitigation.

3.23 There does not appear to be any discernible patterns to accidents at any of the junctions or carriageways in the vicinity of the proposed development. The prevailing cause for the collisions appear to be road user error and there is no apparent collisions issue in the area that would affect, or be affected by, the proposed development.

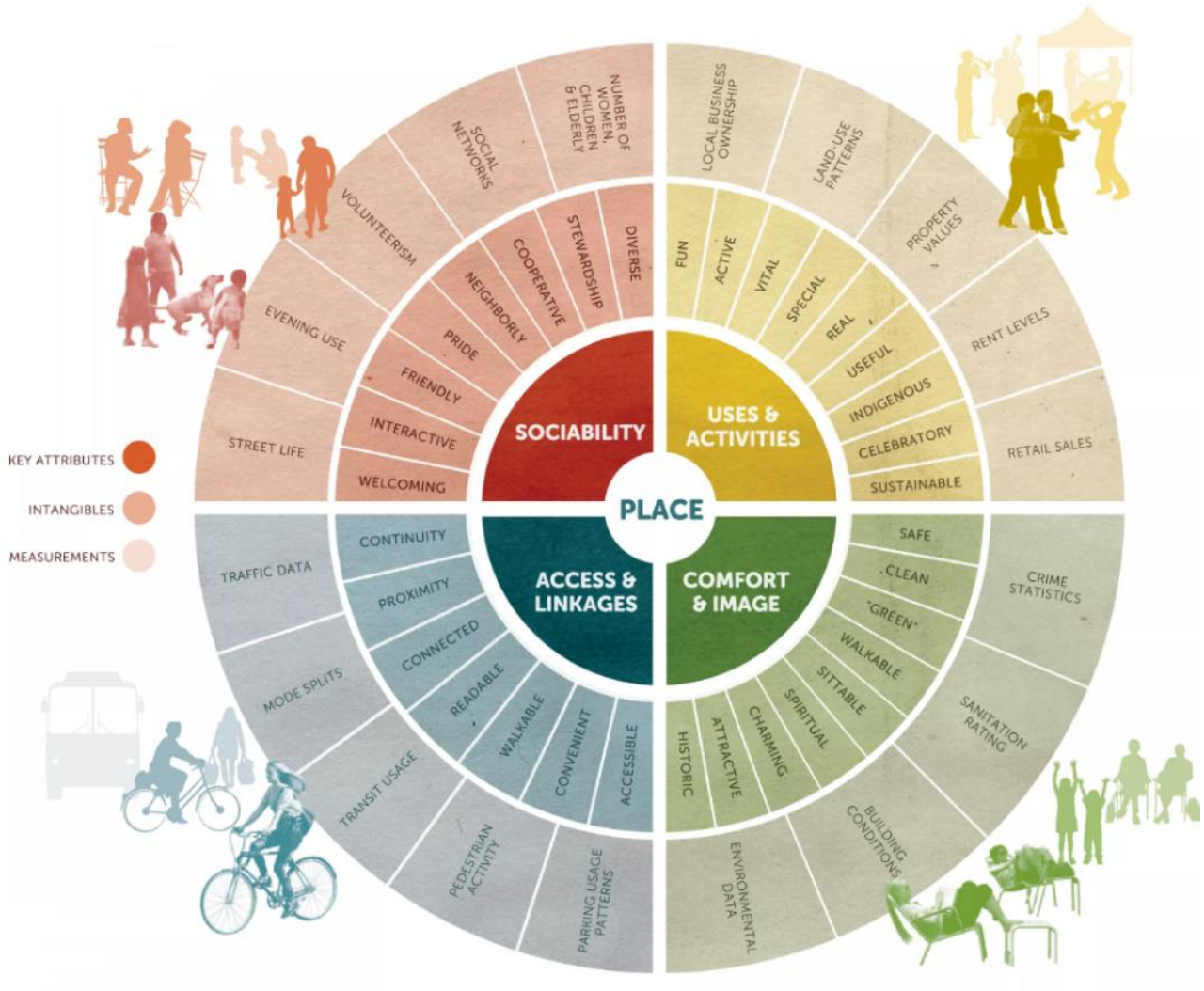
4.1 The Application site comprises 41 residential units on the land to the east of the B6096 Nanny Marr Road, Darfield, Barnsley, google maps link https://bit.ly/2BIX1uu



AFFORABLE HOUSIN				
CODE	TYPE	NO	Type %	SQM
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F112	3 BED 5P	20	57.14	83.7
F115	3 BED 5P	3	8.57	85.6
		35	100.00	
OPEN MARKET SAL				
CODE	TYPE	NO	Type %	SQM
F112	3 BED 5P	6	100.00	83.7
		6	100.00	

Figure 4.1
Illustrative layout

4.2 Sense of place is fundamental to a richer and more fulfilling environment; the Application site and the adjoining residential community achieve place making and meets the ethos of MfS for a residential development.



Accessibility Audit

Pedestrian and Cycle Connectivity

4.3 As part of the concept design of the masterplan, 2m footways are provided within the development site, on both sides of the access road linking to those along Nanny Marr Rd which will result in improved access from the development site into the surrounding area and provide permeability throughout the site

4.4 It is therefore considered that the development site could be integrated with existing pedestrian and cycle infrastructure in the area.

Access to Education

4.5 The site accessibility audit confirmed that the site is within an acceptable walking distance of schools within the local area. These findings can be supported by Department for Transport (DfT) 2014 National Travel Survey (NTS) data:

- For trips of less than 1 mile (1,600m), 83% of trips made by primary school children are on foot;
- For secondary school trips of less than 1 mile (1,600m) 92% are on foot, whilst for trips between 1 mile (1,600m) and 2 miles (3,200m) 60% of trips are made on foot;
- The above would suggest that walking is an acceptable mode of travel for primary school trips up to 1,600m and for secondary school trips up to 3,200m which is broadly supported by the CIHT guidelines.

4.6 As detailed in Chapter 3, there are at least 3 schools within c. 1km and 6 within 1.6km radius including Upperwood Academy, Outwood Primary Academy, All Saints Academy, St Michael and All Angels Catholic Primary, Netherwood Advanced Learning Centre and Netherwood Academy. It is considered therefore, that the proximity of the site to the surrounding schools provides an opportunity to encourage walking and cycling as an alternative to the use of the private car for journeys to school.

Access to Employment

4.7 The CIHT document, Guidelines for Providing for Journeys on Foot (extract included in Appendix A, Section A4) suggests 2,000m as an acceptable walking distance for commuting. This is supported by DFT data (NTS statistics Table NTS0306) which shows the average distance walked is 1.4 miles (2,240m).

4.8 The accessibility audit has identified several employment opportunities within an acceptable walking and cycling distance of the site, based on information published by the DfT and CIHT.

- When considering acceptable cycling distances, DFT NTS statistics and Sustrans (Appendix A, Section A6) acknowledges that cycling up to 5km has the potential to replace car journeys.
- There are substantial employment opportunities to the south of the site in Low Valley, Brampton and Broomhill to name a few which are well within 5km.

4.9 In conclusion, it is considered that there are opportunities to encourage walking and cycling to access local employment opportunities.

Access to Other Services and Amenities

4.10 As discussed in Chapter 3, there is a range of services and amenities within walking and cycling distance of the development site and it is therefore considered that the site is accessible on foot and by cycle and offers opportunities for access by sustainable modes of travel.

GENERAL DESIGN PRINCIPLES

- The site's main access road shall be 5.5m wide incorporating 2m footways on both sides;
- Turning heads will be provided and tested to ensure a min 11.2m refuse HGV enters and exit in forward gear;
- Refuse collection points are provided if the collection vehicle / operatives are unable to get to bins within 25m. Collection points will be located within 30m from the furthest dwelling.
- Private drives serve a maximum of 5 units;
- The access road will be designed to encourage vehicle speeds below 20mph and ensure that the 20mph is self-enforcing. If straights are longer than 80m, a speed reduction measure will be introduced (e.g. gateway feature, speed ramp / table / cushions, etc);
- If relevant, service strips will be provided on shared surfaces as required;
- No unbound materials will be used in the surface treatment of the proposed vehicular accesses within 6m of the highway boundary;
- Parking spaces will be in curtilage and be at 90 degrees to the kerb line;
- Car parking shall be provided in accordance with BMBC parking standards with additional communal visitor parking spaces required within the adoptable estate road areas of the development. Parking provision for any plot will be conveniently located adjacent to the front of the property, thereby avoiding remote parking spaces, which could result in indiscriminate parking on footways and carriageways.
- Garages and driveways dimensions will be in line with BMBC design guidelines; Any garages shall be at least 6m × 3m internally dimensioned to be counted as a car parking space or 6m x 6m for double garages. If the driveways serve a garage they will measure a minimum of 5.5 metres in length to enable access. Where there is no separate pedestrian access to the dwelling the driveway will be at least 1 metre wider with suitable delineation in place to distinguish between parking and pedestrian areas. The manoeuvring area to/from parking spaces to be 6 metres;
- Parking spaces shall be at least 2.5m wide with 0.3m added to any parking area adjacent to a boundary fence, wall or building with a further 0.8m added where the drive also acts as the pedestrian route to the front door or bin drag route. Car parking shall be located in a convenient place for residents with visitor car parking spread around the site including within turning heads to prevent these building obstructed by parked vehicles.
- All roads, footways, bridleways, cycleways, etc will be built to adoptable standards even if they are not offered for adoption;
- Where applicable, within the development redline, footways will incorporate dropped kerbs and tactile paving to provide safe access for all road users and good connectivity to local amenity; and

- The applicant shall submit full conveyancing plans with the planning application to show those area to be offered as public highway, those within private individual ownership and those managed and maintained by a maintenance company (if any).

SITE ACCESS

4.11 As illustrated in Figure 4.1, the main vehicular access is directly off Nanny Marr Road. The junction's design, layout and geometry have been agreed with BMBC.

4.12 Detailed design of the access road junction arrangements will be provided in satisfaction of any planning conditions imposed.

Visibility Splay and Stopping Sight Distances

4.13 Nanny Marr Rd falls within the definition of Street:

- It has a speed limit of 40 mph or less;
- Mainly built up on both sides with residential or a mix of residential and local facilities, shops and so on; and
- Have a high place function eg direct frontage access, on street parking etc

4.14 As such, it is appropriate to implement MfS visibility splay and SSD calculations and in line with the Technical References, Appendix A of this study, a 2.4m x 43m visibility splays will be provided and a stopping sight distance of 43m.

Pedestrian & Cyclists Connectivity

4.15 As discussed in earlier sections, 2m footways will be introduced throughout the application site (except shared surfaces) linking to those along Nanny Marr Rd.

4.16 Where required, pedestrian sight splays of 2 metres x 2 metres will be provided to achieve clear visibility at a height not exceeding 600 mm above the adjoining carriageway level.

4.17 As discussed in Chapter 3, the site is located within the CIHT guidelines [Appendix A –Figure h] of local amenities and consequently based on the aforementioned, a proportion of trips associated with the development will be made on foot or cycle.

Car Parking

4.18 Parking would be provided having regards to BMBC Parking Standards an extract of which is attached in Figure 4.2.

Table 1 Maximum numbers of spaces allowed*			
Use	**Barnsley Urban**	**Borough wide (excluding Barnsley Urban)**	**Threshold above which standard applies***
C3 Dwellinghouses			
Housing and flats	1 space for dwellings with 1 or 2 bedrooms 2 spaces for dwellings with 3 or more bedrooms	1 space for dwellings with 1 or 2 bedrooms 2 spaces for dwellings with 3 or more bedrooms	All development

Figure 4.2
Car and cycle parking

4.19 Car parking shall be located in a convenient place for residents with visitor car parking spread around the site including (if possible) within turning heads to prevent them being obstructed by parked vehicles.

Disabled Access

4.20 Within the redline of the development, all newly constructed footpaths and kerbs would have level access approaches with drop kerbs and tactile paving at crossing points. It is intended that the development would be fully compliant with the Disability Discrimination Act 2005.

Servicing

4.21 It is anticipated that the development would attract the usual servicing requirements such as refuse collection, food deliveries and post. The development's design and layout will allow for all movements and turning points to be accommodated within the site.

4.22 The detailed architectural planning drawings shall show the location of bin storage points for each dwelling. If the reversing distance for a refuse HGV or the walking distance for refuse collection employees exceeds 25m, a refuse collection point will be located in an easily accessible location (within 25m from the HGV stationary point) , behind the adopted highway and without obstructing the visibility splay.

4.23 Swept path analysis for a minimum 11.2m refuse vehicle is attached in Appendix 2 demonstrating that all turning heads can accommodate such a vehicle.

VEHICULAR TRIP GENERATION

4.24 In order to estimate the vehicular trips associated with the development, the same trip rates and methodology for the recently consented residential development to the north of the Application site were used. The methodology was TRICS based in accordance with the following criteria:

- 03 - Residential A – Houses Privately Owned [to achieve a worst case scenario]
- 04 – Education B – Secondary [permitted use]
- 01 – Retail From ESJ Associates TA
- The TRICS database version used was 2015 v7.2.3;
- Sites in London, Northern Ireland, Republic of Ireland and Isle of Man were excluded;
- The AM peak hour is taken as 08:00 – 09:00;
- The PM peak hour is 17:00 – 18:00;
- Re-surveyed sites were filtered and the older data excluded; and
- The data was 'cross tested'.

LAND USE [TRICS REFERENCE CODE]	AM PEAK [08:00 – 09:00]				PM PEAK [17:00 – 18:00]			
	ARRIVAL		DEPARTURE		ARRIVAL		DEPARTURE	
03 / A	Factor per unit	Total trips	Factor per unit	Total trips	Factor per unit	Total trips	Factor per unit	Total trips
41 dwellings	0.159	7	0.393	16	0.377	16	0.181	7
Total peak hour trips	***23***				***23***			

Figure 4.3
Peak hour trips generated by the existing use

4.25 Figure 3.6 indicated that the site's permitted use as Secondary school for 900 pupils may generate some 260 and 35 movements [arrivals + departures] in the above shown AM and PM peak hours. The cumulative impact of the previously consented residential development located to the north of the application site and this proposal will equate to 45 AM and PM peak hour trips which is substantially lower in the AM peak that the previous use as a school and only 10 higher in the PM peak which is negligible.

4.26 As a sensitivity test, even if the previous site use is ignored, Figure 4.3 illustrates that the development proposals may result in 23 movements (arrival + departure) in the AM / PM peak hours which is one every 2.5 minutes which is not material.

4.27 Taking into consideration the Technical References (Appendix A – A9), no highway or junction capacity assessment is required and the proposed development would, in highway terms, have no material impact on the highway network in terms of its capacity and safety.

MULTI-MODAL MODES OF TRAVEL

4.28 In order to estimate the likely modal split associated with travel to/from the proposed development, the existing average travel characteristics of local residents [employed and not working from home] for Darfield which was recorded during the 2011 Census have been studied.

4.29 The percentage modal split has been applied to the calculated vehicular generated trips (Figure 4.3) to derive the total number of multi-modal person trips associated with the proposed residential development as shown in Figure 4.4.

4.30 The Census Data indicates that 75.2% of residents travel by single occupancy vehicle [SOV]. Assuming that similar travel patterns will be experienced at the proposed development, it would be expected that around 75% of trips to/from the application site will be made by car.

4.31 It can also be seen from the information provided that Car sharing followed by Walking and public transport will likely represent the second to fourth most popular travel mode amongst residents. The total sustainable mode of travel [i.e. other than SOV] is c. 24.8%.

4.32 This data would be useful to the Travel Plan Co-ordinator, to benchmark the development and undertake steps to promote the sustainability and accessibility of the site.

Mode of Travel	Percentage	Two-way Trips AM Peak	Two-way Trips PM Peak
Tram / Metro	0.0%	0	0
Train	1.4%	0	0
Bus	5.9%	2	2
Taxi	0.3%	0	0
Motorcycle	0.7%	0	0
Car	75.2%	23	23
Passenger	7.9%	2	2
Cycle	0.5%	0	0
Walking	7.6%	2	2
Other	0.4%	0	0
Total	100.0%	31	31

Figure 4.4
2011 Census Data – Method of Travel to Work
Person Trips by Mode

DEVELOPMENT IMPACT

Vehicles

5.1 As a sensitivity test, even if the previous site use is ignored, Figure 4.3 illustrates that the development proposals may result in 23 movements (arrival + departure) in the AM / PM peak hours which is one every 2.5 minutes which is not material.

5.2 Taking into consideration the Technical References (Appendix A – A9), no highway or junction capacity assessment is required and the proposed development would, in highway terms, have no material impact on the highway network in terms of its capacity and safety.

Pedestrians

5.3 Figure 4.4 indicated that there will be up to 2 pedestrian movements (arrival + departure) in the peak hours; this equates to 1 movement every 30 minutes on the local pedestrian network which is negligible in terms of footway capacity, a view based on site observations and the potential number of approach routes. It is considered that these additional trips can be accommodated within the pedestrian infrastructure surrounding the site.

Cyclists

5.4 Given the site's accessibility to local cycle routes, it is considered that the development proposals will encourage and facilitate travel by bike.

5.5 Figure 4.4 indicated that there will be no cyclist movements (arrival + departure) in the peak hours hence, it is considered that any additional trips can be accommodated without any detrimental impact.

Public Transport

5.6 Chapter 3 indicated that bus services run at a combined frequency of 8 services per hour. The anticipated additional demand generated by the development (up to 2 passengers) would equate to approximately 0.25 additional passenger per bus during the peak hours.

5.7 It is therefore concluded that the anticipated generated trips will not have a detrimental impact on the operation of existing public transport services and iTP understand that there is sufficient capacity to accommodate the proposed generations.

WELCOME PACK

5.8 A Welcome Pack should be produced and distributed to all residents at key handover. The Pack should include:

- Information about travelling to the development by sustainable means of transport;
- Key public transport information / links such as https://bustimes.org/localities/darfield or https://www.travelsouthyorkshire.com/timetablefinder.aspx and https://liftshare.com/uk
- Assist residents in producing personalised local travel arrangements, highlighting the travel options available to them by walking, cycling and public transport and the benefits thereof; and
- Telephone numbers to local taxi companies.

FRAMEWORK TRAFFIC MANAGEMENT PLAN - CONSTRUCTION PHASE

5.9 The CTMP will be produced and would typically be expected to contain some or all of the following in detail:

- The CTMP must be appropriately titled, include the site and planning permission number;
- Contact details of the Project Manager and Site Supervisor responsible for on-site works to be provided;
- Routing of construction traffic and delivery vehicles will be shown and signed appropriately to the necessary standards/requirements. This includes means of access into the site;
- Details of and approval of any road closures needed during construction;
- Details of and approval of any traffic management needed during construction;
- Details of appropriate signing, to accord with the necessary standards/requirements, for pedestrians during construction works, including any footpath diversions;
- The erection and maintenance of security hoarding / scaffolding if required;
- A regime to inspect and maintain all signing, barriers etc;
- Details of wheel cleaning/wash facilities – to prevent mud etc, in vehicle tyres/wheels, from migrating onto adjacent highway;
- The use of appropriately trained, qualified and certificated banksmen for guiding vehicles/unloading etc;
- No unnecessary parking of site related vehicles (worker transport etc) in the vicinity – details of where these will be parked and occupiers transported to/from site to be submitted for consideration and approval. Areas to be shown on a plan not less than 1:500.
- Layout plan of the site that shows structures, roads, site storage, compound, pedestrian routes etc.
- Any temporary access arrangements to be agreed with and approved by the LPA Highways dept;
- Details of times for construction traffic and delivery vehicles, which must be outside network peak and school peak hours.

5.10 Traffic movements and site conditions recommendations include but not limited to:

- Immediately upon commencement, all deliveries, operatives and visitors to the Project will report to the security gate. This will be communicated to all early works contractors at their Pre-start meeting;
- The main contractor should develop a logistics plan highlighting the access point for the project, loading bay, pedestrian / vehicular segregation, welfare, storage, security & material handling that will be enforced following the full Site establishment;
- Contractors, visitors and staff will use existing pedestrian pathways until such time as the sites are enclosed and access control is operational;
- As part of the construction period's mitigation measures, it is proposed that the construction HGV traffic be restricted between the hours of 07:00 – 09:00 and 16:00 – 18:00, Monday to Friday;

  No site clearance or construction work shall take place on the site on Sundays or public holidays. On all other days no site clearance or construction work shall take place on the site outside of the following times: 0700 – 1900 Mon – Fri and 0800 – 1300 Saturdays
- The construction materials 'lay down' areas will allow for a staggered delivery schedule throughout the day, avoiding peak and unsociable hours;
- An integral part to the progress meetings held with all trade contractors is the delivery schedule pro-forma. In line with the recommendations of this study, all contractors should be required to give details of proposed timing of material deliveries to the site. At this stage they will be given a specific area for delivery;
- The Traffic Management Plan and the control measures therein should be included within all trade contractor tender enquiries to ensure early understanding and acceptance / compliance with the rules that will be enforced on this project;
- Under no circumstance will HGVs be allowed to lay-up in surrounding roads. All personnel in the team will be in contact with each other and site management who in turn will have mobile and telephone contact with the subcontractors; and
- Maintain roads in a clean and safe condition.

5.11 The Principal Contractor would be encouraged to give serious consideration to local suppliers and priorities to those with premises adjoining the proposed development. This would enable construction materials to be delivered in the shortest possible distances, minimising the impact on the highways network.

5.12 Further, should any abnormal loads be delivered using the highways network, this would be programmed well in advance, notified to and in accordance with the Highways England [HE] and the Police and preferably between the hours of 22:00 and 05:00 [subject to the HE and traffic police agreement] and in line with the HE's latest abnormal loads procedures [ESDAL https://www.gov.uk/esdal-abnormal-load-notification].

5.13 HGVs must not arrive or leave the sites except between agreed hours. Any proposed HGV movements outside the agreed hours must be notified to the Construction Manager for prior approval with the Highway Authority and where relevant, the HE.

- Security / gatemen will be in position half an hour before start of work and before the earliest delivery time.
- If relevant, persistent offenders will be reported to the Project Manager, who will action with the directors of the offending company.

5.14 All plant and vehicles would have engines isolated when not in use.

5.15 The Principal Contractor to provide a schedule, detailing the volume, timing, density and type of construction traffic in order to ensure that impact on the highways network is kept to a minimum.

5.16 Measures shall be developed to control the traffic on site and the Traffic Management Plan must be updated regularly as the project develops.

5.17 The Principal Contractor, in liaison with the Highway Authority, would install access signage for their construction traffic at designated areas to minimise the potential of vehicles taking the incorrect route. The Principal Contractor and site operators must abide by all restrictions associated with Planning Permission.

5.18 Additional Advisory Guidance is included in Appendix A, Section A13.

Bus Layby

5.19 It is proposed that the existing southbound bus layby in the immediate vicinity of the site access be reinstated to a kerbside bus stop as discussed and agreed with BMBC.

S278 Works

5.20 Any improvements/highway mitigations on the public highway, highlighted as part of the Study or negotiated will be undertaken under a S278 Agreement with the Highway Authority.

5.21 For example, highway works will be required as part of the development to facilitate the site access, reinstate footways, reinstate the bus stop and provide any appropriate mitigation identified within the Study. These works will require the applicant to enter into a S278 Agreement with the Highway Authority to undertake them within the public highway. Where required, all works within the public highway shall be accompanied by a Stage 1 Road Safety Audit submitted in satisfaction of any planning conditions imposed. The applicant will wish to offer the internal layout of the development for adoption as public highway through a s38 Agreement and therefore the internal layout shall be designed in accordance with adoptable standards in satisfaction of any planning conditions imposed.

Lighting

5.22 Details pertaining to the impacts on existing street lighting and provision of new street lighting will be included in the detailed design of the scheme in satisfaction of any planning conditions imposed.

5.23 External lighting of private areas will ensure that no light spill impacts upon the existing and future highway.

RESIDUAL IMPACT

5.24 Taking into account all the factors assessed in this report and the mitigation measures proposed, a final analysis of the impacts resulting from the development proposals has been carried out and is summarised below:

- Junction / Link Capacity — No Impact;
- Driver Delay — No Impact;
- Environmental Impact — No Impact [Appendix A - A10];
- Road Safety — No Impact;
- Public Rights of Way — No Impact; and
- Overall — No Impact.

5.25 It is therefore considered that the development proposals would have an overall no impact in respect of highways and transport.

6.1 This Study assessed the impact of the proposed development on the highway network both during construction and once a development is completed and has ensured:

- That the highway network in the area can accommodate the anticipated trip generation;
- That adequate manoeuvring / parking space is provided and that safe access can be achieved;
- That the highway remains unobstructed for the safe passage of all users of the highway and that any development does not have an adverse impact on the safety of all users of the highway.

6.2 This report described the development proposals and surrounding existing facilities such as local services, pedestrian routes, public transport services and cycle ways. These sections demonstrate that the development proposal complies with the local and national guidelines and policies.

6.3 Additionally, the report tests the impact of the development on the highway network to establish the extent of any significant highway impacts and evaluates compliance with the NPPF transport planning 'test' which prevents refusal on transport grounds unless the impacts of development are 'severe'.

6.4 Detailed analysis indicates that the proposed development may generate a maximum of 23 movements / two-way trips in the AM/PM peak hours. The detailed analysis and impact assessment have demonstrated that:

- The proposed access arrangements would adequately meet the operational demands of the development and introduce improved highway safety;
- The highway network is adequate to support the vehicle movements for the proposed development, so as not to be detrimental to highway safety of road users; and
- The development does not result in an unacceptable impact on highway safety or a residual cumulative impact on the road network that is severe and thus should not be refused on transport grounds, as set out in paragraph 109 of the Revised NPPF.

6.5 It is concluded that the proposed development meets all safety and Planning Policy requirements and will have no material impact onto the highway network and as such, there are no transport / highways reasons for refusal of planning permission.

TERM	DEFINITION
AADT	**Annual Average Daily Traffic**. Average of 24 hours flows, seven days a week, for all days within the year
AAWT	**Annual Average Weekday Traffic**. As AADT but for five days, (Monday to Friday) only.
Accessibility	Accessibility can be defined as 'ease of reaching'. The accessibility objective is concerned with increasing the ability with which people in different locations, and with differing availability of transport, can reach different types of facility.
AM Peak	Denoting the morning peak period
AST	**Appraisal Summary Table**. This records the impacts of the scheme according to the Government's five key objects for transport, as defined in DFT guidance contained on its Transport Analysis Guidance web pages, Web TAG
ATC	**Automatic Traffic Count**, a machine which measures traffic flow at a point in the road.
AWT	**Average Weekday Traffic**. Average of Monday to Friday 24 hour flows.
CRF	**Congestion Reference Flow**. AADT flow at which a road is likely to be congested in the peak periods of an average day.
DfT	**Department for Transport**
DMRB	**Design Manual for Roads and Bridges**
FTP	**Framework Travel Plan**
HGV	**Heavy Goods Vehicle**
Highways Agency	An Executive Agency of the Department for Transport, responsible for operating maintaining and improving the strategic road network in England
IP	**Inter Peak**. The time between the AM and PM peaks
Light vehicle	Not a HGV. For traffic flow data. It is a vehicle less than 5.2m in length
MfS	**Manual for Streets**
NRTF	**National Road Traffic Forecast**. This document defines the latest forecasts of the growth in the volume of motor traffic.
OGV1,OGV2	**Other Goods Vehicle**. OGV1=Goods Vehicles with 2 or 3 axies, OGV2=Goods vehicle.
PIA	**Personal Injury Accident**. A road traffic accident in which at least one person required medical treatment.
PM Peak	Evening peak period.
Severance	Community severance is the separation of adjacent areas by road or heavy traffic, causing negative impact on non-motorised users, particularly pedestrians.
SRN	Strategic Road Network
TA / TIA	**Transport Assessment / Traffic Impact Assessment**
TP	**Travel Plan**
TS	**Transport Statement**
TAG	Transport Analysis Guidance, as defined in Web TAG
TEMPRO	**Trip End Model Presentation Program**, DFT software which provides forecast data on trips for transport planning purposes.
VPD	**Vehicles Per Day**
Web TAG	DFT's website for guidance on transport studies at http://www.webtag.org.uk/

A.1 PICS ANALYSIS CRITERIA

PRECIPITATING FACTORS	MAIN CONTRIBUTORY FACTOR
Failed to give way	Behaviour - careless/thoughtless/reckless Failed to judge other person's path or speed Failed to look Looked but did not see Inattention
Failed to avoid vehicle or object in carriageway	Behaviour - careless/thoughtless/reckless Failed to judge other person's path or speed Failed to look Looked but did not see Inattention Excessive speed Following too close Lack of judgement of own path
Loss of control of vehicle	Impairment – alcohol Behaviour - careless/thoughtless/reckless Behaviour - in a hurry Inattention Excessive speed Inexperience of driving Interaction/competition with other road users Lack of judgement of own path Site details - bend/winding road Slippery road
Pedestrian entered carriageway without due care	Impairment – alcohol Behaviour - careless/thoughtless/reckless Behaviour - in a hurry Failed to judge other person's path or speed Failed to look Looked but did not see Inattention Crossed from behind parked vehicle etc.
Poor turn / manoeuvre	Behaviour - careless/thoughtless/reckless Failed to judge other person's path or speed Failed to look Looked but did not see Inattention Excessive speed Lack of judgement of own path

Figure a
PIC Analysis Criteria

A2 VISIBILITY SPLAYS

1. Drivers emerging from minor roads or accesses require adequate visibility in each direction to enable a safe manoeuvre to be made. Visibility splay envelopes are made up of two elements, the 'x' distance and the 'y' distance. The 'x' distance is the distance along the minor road (site access) from the give way line with the major road and the 'y' distance is the distance along the nearside kerb in both directions from the centre line of the minor road. Figure b shows the construction of a typical visibility splay:

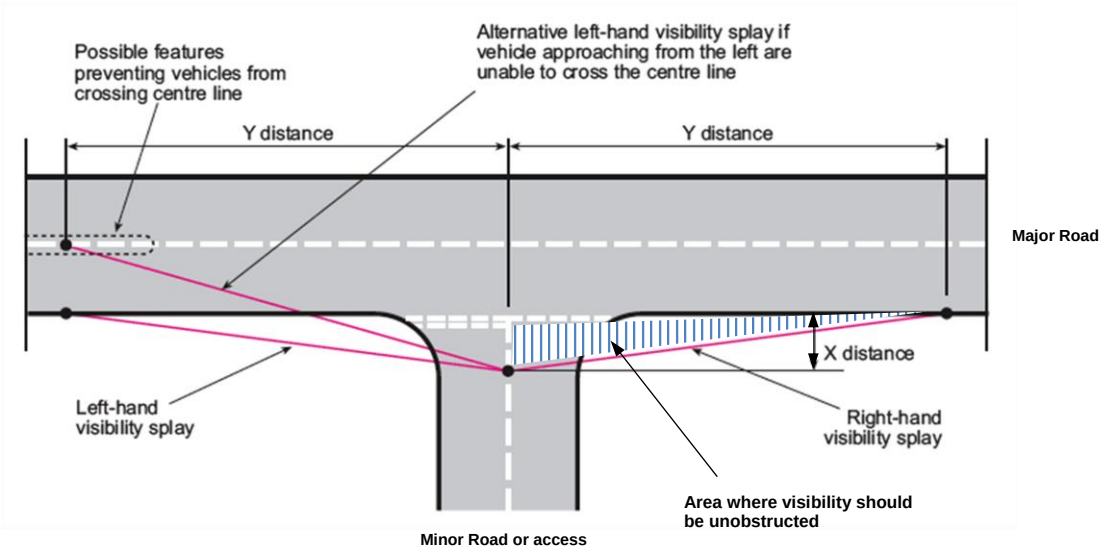


Figure b
Visibility splay requirements

2. The suggested requirements for the minor road distance (dimension 'x') is dependent upon the type of minor access and the choice of setback distance is related to the forecast traffic using the access. Figure c indicates typical requirements:

Type of Minor Road	X – Dimension (m)
The 4.5m allows vehicles to move slowly up to the give way line and leave the junction without stopping and covers the situation where two light vehicles may want to accept the same gap in the main road traffic.	4.5
The minimum necessary for motorists to see down the major road without encroaching upon it. The 2.4m set back relates to normally only one vehicle wishing to join the main road at one time.	2.4
Single dwelling or small cul-de-sac of a half a dozen dwellings, or cases of lightly used accesses and the site conditions are particularly difficult [the latter being as a relaxation]	2.0

Figure 4c
Typical Minor Road 'X' distance

3. The larger 'x' distance of 4.5 metres is used to reduce traffic delay on public roads and allows vehicles to move slowly up to the give way line and leave the junction without stopping. A shorter 'x' distance is appropriate as a reduced distance introduces an element of traffic calming, lowering vehicle speeds and hence, a minimum of 2.4 metres would be acceptable in this location.

4. The minimum requirement for the major road distance (dimension 'y') is dependent upon the speed of the major road. Department for Transport Design Manual for Roads and Bridges TD9/93 Table 3 [and similarly, TD42/95 Table 7/1] provides an indication of desirable minimum stopping sight distance [Figure d]

Design Speed of Major Road (kph)	'y' Distance (m)
50	70
60	90
70	120
85	160
100	215
120	295

Figure d
'y' visibility distance from the Minor Road

5. In the light of recent research into vehicle stopping distances and highway safety a recent DfT approved publication 'Manual for Streets 2 – Wider Application of the Principles (MfS2), published at the end of September 2010 states the following:

- Paragraph 1.3.2 states *"It is clear from Table 1.1 that most of MfS advice can be applied to a highway regardless of the speed limit.* ***It is therefore recommended that as a starting point for any scheme affecting non-trunk roads, designers should start with MfS****".* The bold text is included within the publication itself and clearly supports the fact that vehicle stopping site distance variables are not dependent upon road classification or traffic volume, but only vehicle speed, driver perception-reaction time and deceleration
- Paragraph 1.3.6 states "*…It is only where actual speeds are above 40mph for significant periods of the day that DMRB parameters for SSD are recommended. Where speeds are lower, MfS parameters are recommended"*

Design Speed	Vehicle Type	Reaction Time	Deceleration Rate
60kph and below	Light vehicles	1.5s	0.45g
	HGVs	1.5s	0.375g
	Buses	1.5s	0.375g
Above 60kph	All vehicles	2s	0.375g (Absolute Min SSD)
	All vehicles	2s	0.25g (Desirable Min SSD)

$SSD = vt + v^2/2(d+0.1a)$
where:
v = speed (m/s)
t = driver perception-reaction time (seconds)
d = deceleration (m/s^2)
a = longitudinal gradient (%)
(+ for upgrades and - for downgrades)

Figure e
'SSD calculations formula based on MfS

Table 7.1 Derived SSDs for streets (figures rounded).

Speed	Kilometres per hour	16	20	24	25	30	32	40	45	48	50	60
	Miles per hour	10	12	15	16	19	20	25	28	30	31	37
SSD (metres)		9	12	15	16	20	22	31	36	40	43	56
SSD adjusted for bonnet length. See 7.6.4		11	14	17	18	23	25	33	39	43	45	59

Figure f
Derived SSDs for Streets – ref: MfS

A3 PEDESTRIAN VISIBILITY SPLAYS

6. Pedestrian sight splays of 2 metres x 2 metres will be provided to achieve clear visibility at a height not exceeding 600 mm above the adjoining carriageway level. As necessary, this will be achieved by:

- Splaying back the building or wall abutting the entrance;
- By setting the building or wall back 2 metres behind the back edge of the footway;
- By widening the entrance by 2 metres each side.

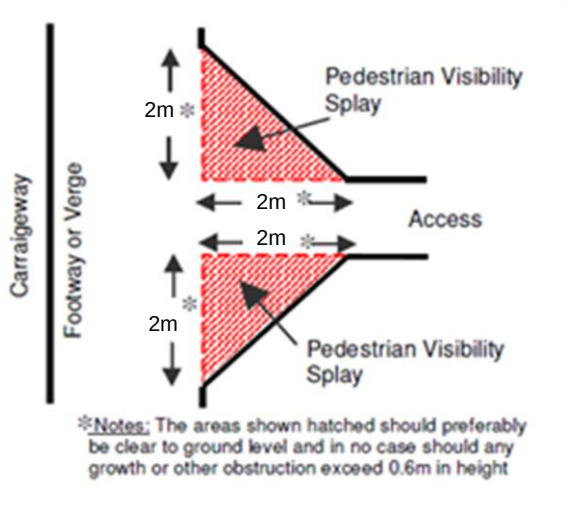


Figure g
Pedestrian Visibility Splays

A4 ACCEPTABLE WALKING DISTANCES – PUBLIC TRANSPORT

7. The Chartered Institution of Highways and Transportation (CIHT) publication "Guidelines for Planning for Public Transport in Developments" states

"Guidelines, not Standards; These Guidelines attempt to set out best practice. It is recognised that it will not always be possible to meet these criteria and that compromise must sometimes be made…It is the task of the professional planner, designer and engineer to decide if a lower standard is acceptable in given circumstances or if another approach would be more beneficial."

8. The above publication does state that the preferred walking distance to a bus stop is 400m, however, it further continues to state:

- "it is more important to provide frequent bus services that are easy for passengers to understand than to reduce walking distances to bus stops by a few meters"; and
- "The bus services should NOT be distorted to satisfy this criteria [400m]".

ACCEPTABLE WALKING DISTANCES *[INSTITUTE OF HIGHWAYS AND TRANSPORTATION]*			
Walking Distance	**Local Facilities ***	**District Facilities****	**Other**
Desirable	200m	500m	400m
Acceptable	400m	1000m	800m
Preferred Maximum	800m	2000m	1200m
* Includes food shops, public transport, primary schools, crèches, local play areas			
** Includes employment, secondary schools, health facilities, community / recreation facilities			

Figure h
Acceptable Walking Distances [CIHT Guidelines]

9. Walking distances have been analysed by iPRT for those trips where walking was the 1st stage mode of travel and bus was the 2nd stage mode of travel. The NTS data from 2002 to 2012 was used. The analysis shows, outside of London, the average distance people walk to a bus stop is 580m and the 85th percentile distance is 810m. It is concluded at 580m there is a good prospect people would walk to a stop and 810m is the furthest distance people could be expected to walk for a bus; these findings support Figure h.

	Median	Mean	85th Percentile
Bus Stops	480	580	810
Rail Stations	810	1010	1610

10. Further, the CIHT 2018 Buses In Urban Development publications recommends:

Table 4: Recommended maximum walking distances to bus stops

Situation	Maximum walking distance
Core bus corridors with two or more high-frequency services	500 metres
Single high-frequency routes (every 12 minutes or better)	400 metres
Less frequent routes	300 metres
Town/city centres	250 metres

A5 ACCEPTABLE WALKING DISTANCES - WALKING

11. Whilst superseded by NPPF, the former PPG13 - Transport sets out useful guidance related to walking and cycling catchments, it states: "Walking is the most important mode of travel at the local level and offers the greatest potential to replace short car trips, particularly under 2 kilometres" (Paragraph 74):

- The Department for Transport's (DfT) document entitled 'Manual for Streets' dated 2007 at Sections 4.4 sets out the requirements for pedestrians stating "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".
- Paragraph 6.3.1 of the Department for Transport (DfT) document 'Manual for Streets' (2007) identifies that a 20 minute walk time (equivalent to a 1.6km walk distance) is acceptable subject to an attractive walking environment.
- Table 3.2 of the Institute of Highways and Transportation (IHT) document 'Providing for Journeys on Foot' sets out acceptable maximum walk distances of, 2km for Commuting and School journeys, 800m for Town Centres, and 1.2km for elsewhere and states: "walking accounts for over a quarter of all journeys and four fifths of journeys of less than one mile" (paragraph 1.12, page 11).

12. In support of Figure H findings, walking for all purposes as the main mode of travel was interrogated using the National Travel Survey data (NTS) to calculate the average and 85th percentile distances travelled. The NTS data had between 7,700 to 8,200 fully co-operating households covering over 18,000 individuals, and so provides a robust sample. The analysis shows, outside London, the average distance people walk is 1.15km and the 85th percentile distance is 1.95km. iPRT recommends the 85th percentile distance should be used to establish the walking catchment.

Journey Purpose	Sample Size	% Split	Median (m)	Mean (m)	85th Percentile (m)
Commuting	2166	7.1%	1000	1250	2100
Business	290	1.0%			
Education / Escort	5609	18.5%	800	1000	1600
Shopping	5958	19.6%	800	1000	1600
Other Escort	1392	4.6%	800	1100	1600
Personal Business	2730	9.0%	800	1000	1600
Leisure	5539	18.2%	800	1150	1950
Other (Including just walk)	6698	22.0%	1200	1450	2400
All	**30382**	**100%**	**800**	**1150**	**1950**

13. The actual distance that people will be prepared to walk to access facilities from the proposal site will depend on a number of factors, including the purpose of their journey. As stated previously, walking has the potential to replace car journeys for purposes such as employment and accessing local facilities where the distance is up to 2km.

A6 ACCEPTABLE WALKING DISTANCES - CYCLING

14. It has been widely acknowledged that cycling has the potential to substitute for short car trips, particularly those under 5km and to form part of a longer journey by public transport.

- This is supported by Sustrans' 2004 research Travel Behaviour Research Baseline Survey 'measuring the potential for change' that cycling offers an alternative to car travel, and particularly for trips of less than 5 kilometres. This research is supported by the 2011 National Travel Survey, which specified average journey lengths, by cycle, of c5km.
- Similar to walking, cycling for all purposes as the main mode of travel was also interrogated using the 2010 to 2012 NTS. The analysis shows, outside London, the average distance people cycle is 4.3km and the 85th percentile distance is 7.25km. iPRT recommends the 85th percentile distance should be used to establish the cycling catchment.

Journey Purpose	Mean Distance Cycled (m)	85th Percentile Distance Cycled (m)
Commuting	4750	8050
Leisure	5350	9650
Shopping	2550	4000
Education / Escort	2300	4000
Business	4450	8050
Personal Business	3150	4800
Other Escort	2700	4800
All Purposes	**4300**	**7250**

- The 2015 CIHT publication Planning for Cycling states that "the majority of cycling trips are for short distances, with 80% being less than five miles and with 40% being less than two miles. However, the majority of trips by all modes are also short distances (67% are less than five miles, and 38% are less than two miles); therefore, the bicycle is a potential mode for many of these trips (DfT, 2014a). Electric bicycles extend the range that can be cycled comfortably, and combined cycle-rail or cycle-bus journeys offer an alternative to car travel for many longer trips.

DfT Cycling and Walking Investment Strategy

15. In April 2017, the government has published its £1.2 billion long-term plan to make cycling and walking the natural choice for shorter journeys.

16. The government wants cycling and walking to become the norm by 2040 and will target funding at innovative ways to encourage people onto a bike or to use their own two feet for shorter journeys.

17. Plans include specific objectives to double cycling, reduce cycling accidents and increase the proportion of 5 to 10 year-olds walking to school to 55% by 2025.

18. The £1.2 billion is allocated as follows:

- £50 million to provide cycling proficiency training for further 1.3 million children
- £101 million to improve cycling infrastructure and expand cycle routes between the city centres, local communities, and key employment and retail sites
- £85 million to make improvements to 200 sections of roads for cyclists
- £80 million for safety and awareness training for cyclists, extra secure cycle storage, bike repair, maintenance courses and road safety measures
- £389.5 million for councils to invest in walking and cycling schemes
- £476.4 million from local growth funding to support walking and cycling

19. In addition, the government is investing an extra:

- £5 million on improving cycle facilities at railway stations
- £1 million on Living Streets' outreach programmes to encourage children to walk to school
- £1 million on Cycling UK's 'Big Bike Revival' scheme which provides free bike maintenance and cycling classes

Access to Employment

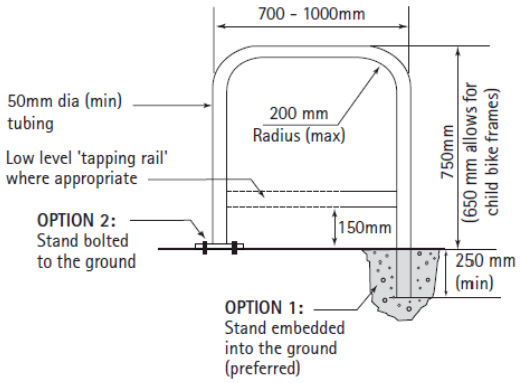
20. The accessibility audit has identified several employment opportunities within an acceptable walking distance of the site, based on information published by the Department for Transport (DfT) and the Chartered Institution of Highways and Transportation (CIHT).

21. The CIHT document, Guidelines for Providing for Journeys on Foot suggests 2,000m as an acceptable walking distance for commuting, but also recognises a distance of up to two miles (3,200m) is practicable for walking.

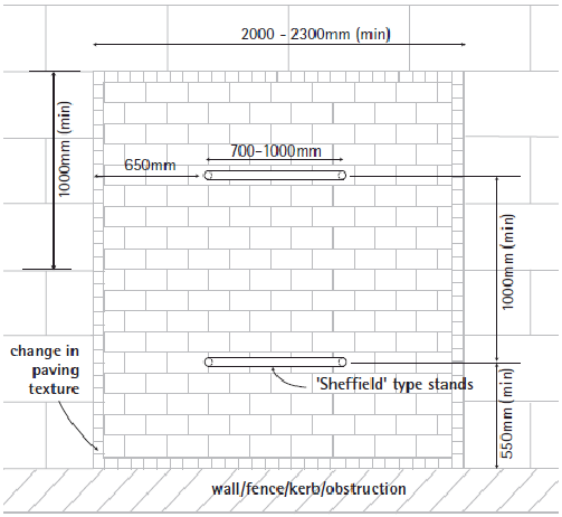
22. This is supported by DfT data which shows over 40% of commuter journeys of less than 2 miles (3,200m) are by walking (Travel To Work – Personal Travel Factsheet 2011, Chart 4).

23. When considering acceptable cycling distances, DFT statistics (National Travel Survey 2014, Table NTS0306) indicate that the average cycle trip is 3.3 miles (5,300m) and DfT Local Transport Note 2/08 (LTN 2/08 – Cycle Infrastructure Design) considers that commuter trips over 5 miles (>8,000m) are not uncommon.

Sheffield Stand

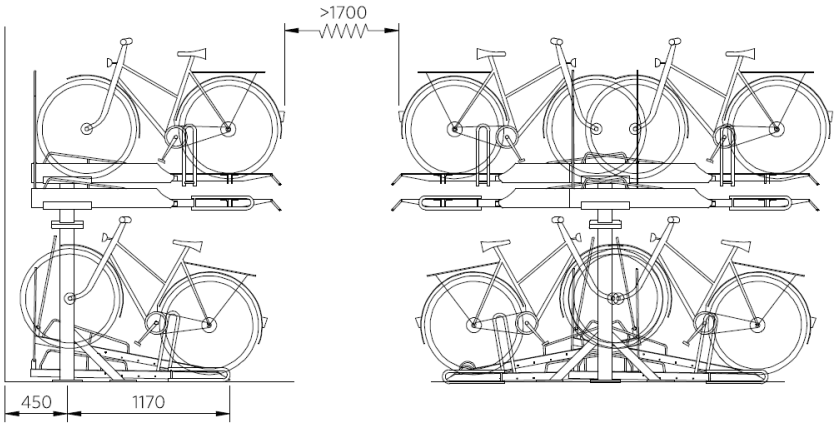


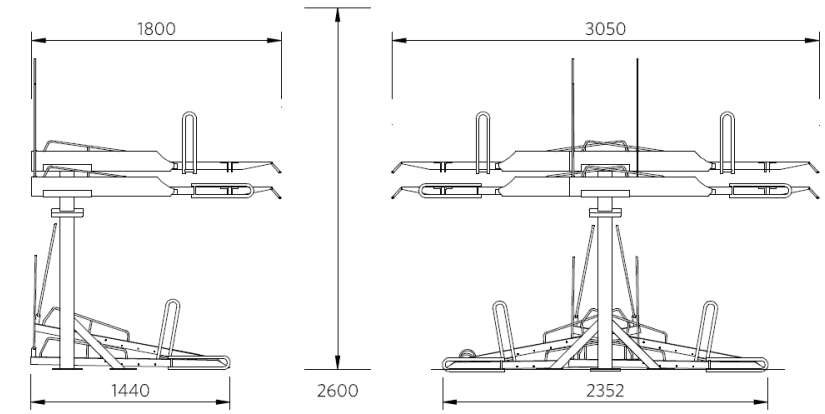
Cycle Parking Stand footprint (plan view)



Site Requirements

- The headroom is the most important factor for this racking system. A minimum of 2600mm is required for maximum capacity.
- Leave 300 to any adjoining side wall to give space for the handlebars.
- The racks are then spaced at a minimum of 400mm apart. We have found 450mm to be a good planning spacing, giving capacity as well as ensuring ease of use.
- Please allow 2000mm for the rack itself, plus a minimum of 1700mm in front for access. This access space can be used by the next row as well.
- The racks can also be installed from a central spine. For this option, please leave 2000mm for access on both sides. The 2-sided unit is then 3100m wide.
- Racks can also be installed at a 45 or 55 degree angle to minimise space.





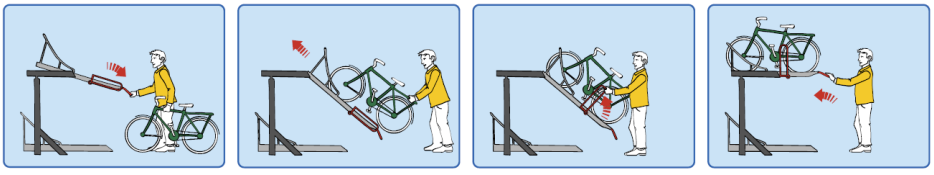


Figure i
Typical cycle stand layout (top image)
High Capacity racks (bottom image)

A7 FORM OF ACCESS

24. DMRB TD41/95 and TD 42/95 which generally provide a number of basic direct access layout types which form the basis of local designs

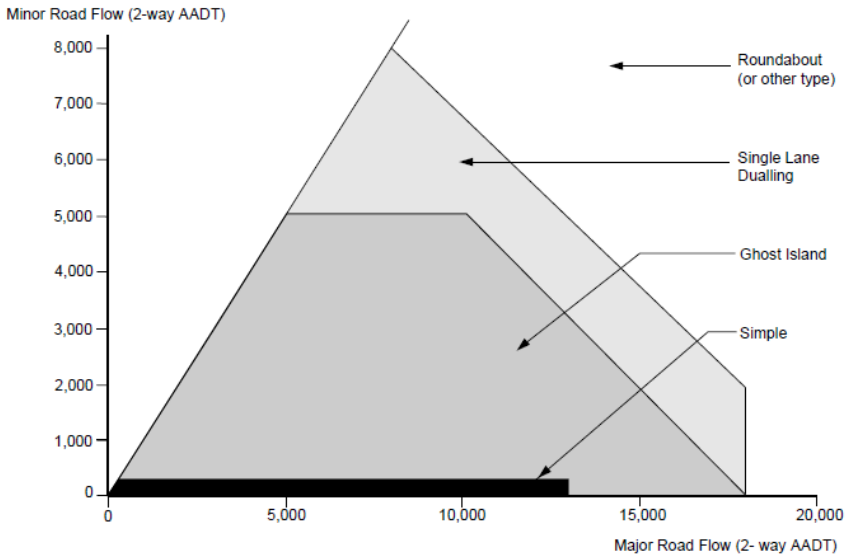


Figure j
Form of Access

A8 TRICS

25. The following site compatibility by main location type matrix was used [TRICS Table 4.1]:

Location Type	Town Centre	Edge of Town Centre	Suburban Area	Edge of Town	Neighbourhood Centre	Free Standing
Town Centre	-	Possibly compatible	Not compatible	Not compatible	Not compatible	Not compatible
Edge of Town Centre	Possibly compatible	-	Possibly compatible	Possibly compatible	Not compatible	Not compatible
Suburban Area	Not compatible	Possibly compatible	-	Possibly compatible	Possibly compatible	Not compatible
Edge of Town	Not compatible	Possibly compatible	Possibly compatible	-	Possibly compatible	Possibly compatible
Neighbourhood Centre	Not compatible	Not compatible	Possibly compatible	Possibly compatible	-	Not compatible
Free Standing	Not compatible	Not compatible	Not compatible	Possibly compatible	Not compatible	-

Figure kj
TRICS sites compatibility

A9 DfT and HE Guidance on Development Impact

26. Although superseded, the technical principles of the DfT Guidance on Transport Assessment [GTA] are robust and suggest in Paragraph 2.11 that the thresholds below which a formal assessment may not be needed, and above which the preparation of a TS or a TA would be appropriate. The thresholds are based upon scenarios which would typically generate 30 two-way peak hour vehicle trips. However, the Guidance does further state that *"Whilst there is no suggestion that 30 two-way peak hour vehicle trips would, in themselves, cause a detrimental impact, it is a useful point of reference from which to commence discussions".*

27. Further, 'Guidelines for Traffic Impact Assessment' published by The Chartered Institution of Highways and Transportation' principles also remain robust and indicate that a significant traffic impact occurs when:-

- Traffic to and from the development exceeds 10% of the existing two-way traffic flow on the adjoining highway.
- Traffic to and from the development exceeds 5% of the existing two-way traffic flow on the adjoining highway, where traffic congestion exists or will exist within the assessment period or in other sensitive locations.

If the TA confirms that a development will have severe impact on the highway network, the level of impact at all critical locations on the network should be established. A particular example of severe impact would be severe worsening of congestion.

28. Highway England's Network Analysis Tool [NAT] suggests that NO material impact may occur because there is no link where development of the site would generate a two-way total of more than 30 trips. The NAT states:

- *No material impact* – because there is no link where development of the site would generate a two-way total of more than 30 trips.
- *Minimal material impact* – where there is no link where the total increase in two-way AM peak hour flow is greater than 35 trips. The choice of 35 is based on an application of the expectation that travel planning cannot deliver a mode shift of more than 15%. Therefore, a robust travel plan to be implemented in these cases.
- *Material impact* – where the increase in total two-way flow on any link is in the range 35-50 trips. At these locations, it is expected that a robust travel plan and a case-by-case assessment of the need for physical mitigation measures.
- *Major impact* - with an increase in total two-way flow on any link in excess of 50 trips. It is expected that a robust travel plan with physical mitigation likely to be necessary and funded by the developer

A10 ENVIRONMENTAL IMPACT

29. 'Guidelines for the Environmental Assessment of Road Traffic' sets out two rules which justify the need for an environmental assessment and indicate potential impacts.

- Rule 1 include highway links where traffic flows will increase by more than 30% (or the number of heavy goods vehicles will increase by more than 30%).
- Rule 2 include any other specifically sensitive areas where traffic flows have increased by 10% or more (or HGV flows have increased significantly).

A11 CAR PARKING – NPPF

30. The NPPF mirrors previous amendments to PPG13 issued in January 2011 aiming to reduce congestion and encourage sustainable development and shared parking, particularly in town centres; This government is keen to ensure that there is adequate parking provision both in new residential developments and around our town centres and high streets.

31. The imposition of maximum parking standards under previous governments lead to blocked and congested streets and pavement parking. Arbitrarily restricting new off-street parking spaces does not reduce car use, it just leads to parking misery. It is for this reason that the government abolished national maximum parking standards in 2011. The market is best placed to decide if additional parking spaces should be provided

32. The 2018 Revised NPPF now states:

If setting local parking standards for residential and non-residential development, policies should take into account (para 105):

a. the accessibility of the development;
b. the type, mix and use of development;
c. the availability of and opportunities for public transport;
d. local car ownership levels; and
e. the need to ensure an adequate provision of spaces for charging plug-in and other ultra-low emission vehicles.

Maximum parking standards for residential and non-residential development should only be set where there is a clear and compelling justification that they are necessary for managing the local road network, or for optimising the density of development in city and town centres and other locations that are well served by public transport (in accordance with chapter 11 of this Framework). In town centres, local authorities should seek to improve the quality of parking so that it is convenient, safe and secure, alongside measures to promote accessibility for pedestrians and cyclists (para 106)

A12 SETTING OF LOCAL SPEED LIMITS

33. The Department for Transport Circular 01/2013 - 'Setting of Local Speed Limits' identified that each Local Authority should respond to the guidance by undertaking a review of all their A & B class roads. The Circular also states that all traffic authorities are required to use the guidance to keep their speed limits under review to accommodate changing circumstances.

34. A key theme of the guidance is that speed limits should be evidence led, self-explaining and seek to re-enforce drivers assessment of what is a safe speed and therefore encourage self-compliance. The guidance also identifies the role of effective speed management and defines that many components of design will need to be considered in parallel to help and encourage road users to adopt compliant and safe speeds.

A13 CONSTRUCTION TRAFFIC GUIDANCE

35. The law says that you must organise a construction site so that vehicles and pedestrians using site routes can move around safely. The routes need to be suitable for the persons or vehicles using them, in suitable positions and sufficient in number and size. The term 'vehicles' includes: cars, vans, lorries, low-loaders and mobile plant such as excavators, lift trucks and site dumpers etc.

36. *The key message is*: construction site vehicle collisions can and should be prevented by the effective management of transport operations throughout the construction process.

37. Key issues in dealing with traffic management on site are:

- Keeping pedestrians and vehicles apart
- Minimising vehicle movements
- People on site
- Turning vehicles
- Visibility
- Signs and instructions

Keeping pedestrians and vehicles apart

38. The majority of construction transport accidents result from the inadequate separation of pedestrians and vehicles. This can usually be avoided by careful planning, particularly at the design stage, and by controlling vehicle operations during construction work.

39. The following actions will help keep pedestrians and vehicles apart:

- **Entrances and exits** - provide separate entry and exit gateways for pedestrians and vehicles;

- **Walkways** - provide firm, level, well-drained pedestrian walkways that take a direct route where possible;
- **Crossings** - where walkways cross roadways, provide a clearly signed and lit crossing point where drivers and pedestrians can see each other clearly;
- **Visibility** - make sure drivers driving out onto public roads can see both ways along the footway before they move on to it;
- **Obstructions** – do not block walkways so that pedestrians have to step onto the vehicle route; and
- **Barriers** - think about installing a barrier between the roadway and walkway.

Minimising vehicle movements

40. Good planning can help to minimise vehicle movement around a site. For example, landscaping to reduce the quantities of fill or spoil movement. To limit the number of vehicles on site:

- provide car and van parking for the workforce and visitors away from the work area;
- control entry to the work area; and
- plan storage areas so that delivery vehicles do not have to cross the site.

People on site

41. The Contractor should take steps to make sure that all workers are fit and competent to operate the vehicles, machines and attachments they use on site by, for example:

- checks when recruiting drivers/operators or hiring contractors;
- training drivers and operators;
- managing the activities of visiting drivers;
- People who direct vehicle movements (signallers) must be trained and authorised to do so and
- Accidents can also occur when untrained or inexperienced workers drive construction vehicles without authority. Access to vehicles should be managed and people alerted to the risk.

Turning vehicles

- The need for vehicles to reverse should be avoided where possible as reversing is a major cause of fatal accidents.
- One-way systems can reduce the risk, especially in storage areas.
- A turning circle could be installed so that vehicles can turn without reversing.

Visibility

42. If vehicles reverse in areas where pedestrians cannot be excluded the risk is elevated and visibility becomes a vital consideration.

43. The Contractor should consider:

- **Aids for drivers** - mirrors, CCTV cameras or reversing alarms that can help drivers can see movement all round the vehicle;
- **Signallers** - who can be appointed to control manoeuvres and who are trained in the task;
- **Lighting** - so that drivers and pedestrians on shared routes can see each other easily. Lighting may be needed after sunset or in bad weather;
- **Clothing** - pedestrians on site should wear high-visibility clothing.

Signs and instructions

44. The Contractor should:

- Make sure that all drivers and pedestrians know and understand the routes and traffic rules on site. Use standard road signs where appropriate
- Provide induction training for drivers, **workers** and visitors and send instructions out to visitors before their visit.

TRANSPORT POLICY CONTEXT

National Transport Policy

i. The Government's long term strategy for transport is set out in "The Future of Transport – a Network for 2030" (DfT White Paper, 2004). An underlying objective of the strategy set out in the White Paper is to deal with the pressures of increasing demand for travel by striking the right balance between environmental, economic and social objectives, now and into the future. In terms of the road network, this means:

- New capacity, where it is needed and justified, on environmental and social grounds;
- Locking in the benefits of new capacity through measures such as high occupancy vehicle lanes and tolling, where appropriate;
- The Government leading the debate on road pricing and the opportunity this gives to motorists to make better choices;
- Better management of the network; and
- Using new technology, so the travelling public can make smarter journey choices.

ii. In terms of enhancing local travel this means:

- Freer-flowing local roads delivered through measures such as congestion charging;
- More, and more reliable buses enjoying more road space;
- Demand-responsive bus services that provide accessibility in areas that cannot support conventional services;
- Looking at ways to make services more accessible, so that people have a real choice about how and when they travel;
- Tackling the environmental impacts of travel by encouraging more sustainable travel choices through promoting the use of construction travel plans, workplace travel plans and personalised journey planning, and encouraging people to consider alternatives to using their cars, and
- Creating a culture and improved quality of local environment, so that cycling and walking are seen as an alternative to car travel for short journeys, particularly for children.

iii. The Local Transport White Paper, 'Creating Growth, Cutting Carbon: Making Sustainable Local Transport Happen' (January 2011) reiterates the Government's vision for a sustainable local transport system that supports the economy and reduces carbon emissions. It explains how the Government is placing localism at the heart of the transport agenda, taking measures to empower local authorities when it comes to tackling these issues in their areas. The White Paper also underlines the Government's direct support to local authorities, including through the Local Sustainable Transport Fund.

iv. The five National Transport Goals are:

- Goal 1: To reduce transport's emissions of carbon dioxide and other greenhouse gases, with the desired outcome of tackling climate change;

- Goal 2: To support economic competitiveness and growth, by delivering reliable and efficient transport networks;
- Goal 3: To promote greater equality of opportunity for all citizens, with the desired outcome of achieving a fairer society;
- Goal 4: To contribute to better safety, security and health and longer life expectancy by reducing the risk of death, injury or illness arising from transport, and by promoting travel modes that are beneficial to health; and
- Goal 5: To improve quality of life for transport users and non-transport users, and to promote a healthy natural environment.

National Planning Policy Framework [NPPF] – *para numbering reflects that in the NPPF*

Promoting sustainable transport

102. Transport issues should be considered 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 transport 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 the design of schemes, and contribute to making high quality places.

103. 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.

104. Planning policies should:

    a. support an appropriate mix of uses across an area, and within larger scale sites, to minimise the number and length of journeys needed for employment, shopping, leisure, education and other activities;

b. be prepared with the active involvement of local highways authorities, other transport infrastructure providers and operators and neighbouring councils, so that strategies and investments for supporting sustainable transport and development patterns are aligned;

c. identify and protect, where there is robust evidence, sites and routes which could be critical in developing infrastructure to widen transport choice and realise opportunities for large scale development;

d. provide for high quality walking and cycling networks and supporting facilities such as cycle parking (drawing on Local Cycling and Walking Infrastructure Plans);

e. provide for any large scale transport facilities that need to be located in the area, and the infrastructure and wider development required to support their operation, expansion and contribution to the wider economy. In doing so they should take into account whether such development is likely to be a nationally significant infrastructure project and any relevant national policy statements; and

f. recognise the importance of maintaining a national network of general aviation airfields, and their need to adapt and change over time – taking into account their economic value in serving business, leisure, training and emergency service needs, and the Government's General Aviation Strategy.

105. If setting local parking standards for residential and non-residential development, policies should take into account:

f. the accessibility of the development;

g. the type, mix and use of development;

h. the availability of and opportunities for public transport;

i. local car ownership levels; and

j. the need to ensure an adequate provision of spaces for charging plug-in and other ultra-low emission vehicles.

106. Maximum parking standards for residential and non-residential development should only be set where there is a clear and compelling justification that they are necessary for managing the local road network, or for optimising the density of development in city and town centres and other locations that are well served by public transport (in accordance with chapter 11 of this Framework). In town centres, local authorities should seek to improve the quality of parking so that it is convenient, safe and secure, alongside measures to promote accessibility for pedestrians and cyclists.

107. Planning policies and decisions should recognise the importance of providing adequate overnight lorry parking facilities, taking into account any local shortages, to reduce the risk of parking in locations that lack proper facilities or could cause a nuisance. Proposals for new or expanded distribution centres should make provision for sufficient lorry parking to cater for their anticipated use.

Considering development proposals

108. 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 to an acceptable degree.

109. 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.

110. Within this context, applications for 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.

111. All developments that will generate significant amounts of movement should be required to provide a travel plan, and the application should be supported by a transport statement or transport assessment so that the likely impacts of the proposal can be assessed.

LOCAL POLICIES

v. Please refer to planning statement

EXISTING BUS LAY-BY TO BE REDUCED IN SIZE TO ALLOW FOR FORMATION OF NEW VEHICLE ENTRANCE

ENTRANCE JUNCTION TO ENGINEERS DETAILS

FURTHER INFORMATION REQUIRED WITH REGARDS TO POTENTIAL NOISE POLLUTION FROM THE ADJACENT COMMERCIAL SITE

ADJACENT COMMERCIAL DEVELOPMENT BY OTHERS

EXISTING ENTRANCE TO BE CLOSED UP WITH MATCHING STONE WALL

POSSIBLE TREE REMOVAL REQUIRED ON EASTERN BOUNDARY



AFFORABLE HOUSING							
CODE	TYPE	NO	Type %	SQM	TOTAL SQM	SQFT	TOTAL SQFT
F114	2 BED 4P	8	22.86	72.6	580.8	781	6248
F113	3 BED 5P	4	11.43	84.3	337.2	907	3628
F112	3 BED 5P	20	57.14	83.7	1674	901	18020
F115	3 BED 5P	3	8.57	85.6	256.8	921	2763
		35	100.00		**2848.8**		**30659**
OPEN MARKET SALE							
CODE	TYPE	NO	Type %	SQM	TOTAL SQM	SQFT	TOTAL SQFT
F112	3 BED 5P	6	100.00	83.7	502.2	901	5406
		6	100.00		**502.2**		**5406**

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N

TOTAL SITE AREA
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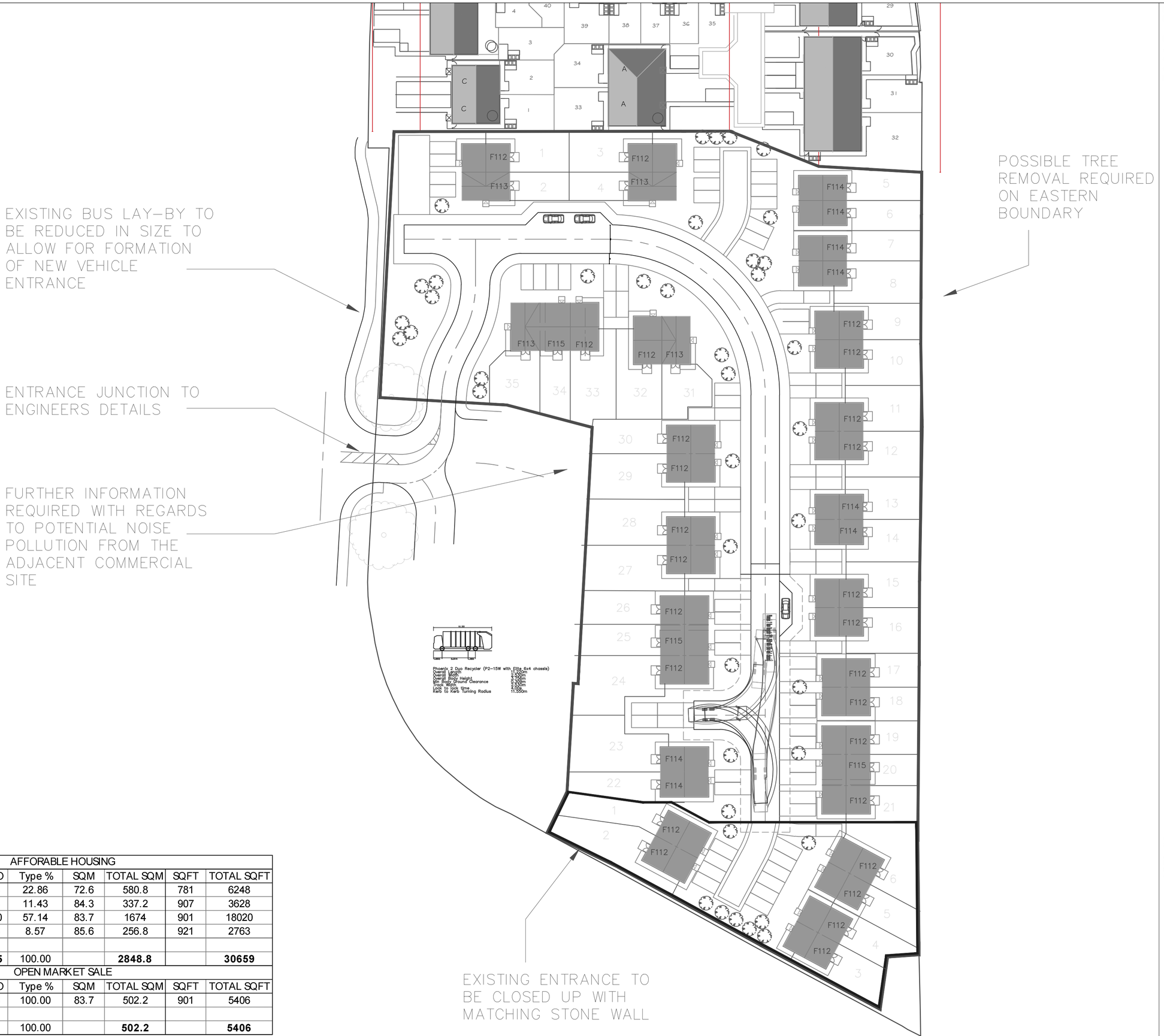
I	Site entrance amended and additional plots added	06.11.18
H	Topo overlaid	13.07.18
G	Site entrance amended further to updated commercial layout	22.06.18
F	Site entrance amended further to email from MS on 31.05.18	01.06.18
E	Site entrance amended to include access to the adjacent site	24.05.18
D	Layout amended to 35 plots with mix per email from MS dated 10.09.17	11.10.17
C	Plots 5&6 swapped with plots 7&8, and plots 38&39 swapped with plots 21&22.	12.07.17
B	Layout amended following email from MS on 03.07.17 incorporating 4bed type	05.07.18
A	Layout amended to suit new boundary	08.05.17

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PROJECT:
Land off Nanny Marr Road
Darfield, Barnsley

TITLE:
Proposed Site Layout

DRAWING PURPOSE:	DATE OF DRAWING:	DRAWN BY:
Planning	Jan 2017	ME
SCALE:	**SHEET SIZE:**	**REVISION:**
1:500	A2	I
PROJECT NO:	**DRAWING NO:**	
377	002	



AFFORABLE HOUSING							
CODE	TYPE	NO	Type %	SQM	TOTAL SQM	SQFT	TOTAL SQFT
F114	2 BED 4P	8	22.86	72.6	580.8	781	6248
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F115	3 BED 5P	3	8.57	85.6	256.8	921	2763
		35	100.00		**2848.8**		**30659**
OPEN MARKET SALE							
CODE	TYPE	NO	Type %	SQM	TOTAL SQM	SQFT	TOTAL SQFT
F112	3 BED 5P	6	100.00	83.7	502.2	901	5406
		6	100.00		**502.2**		**5406**

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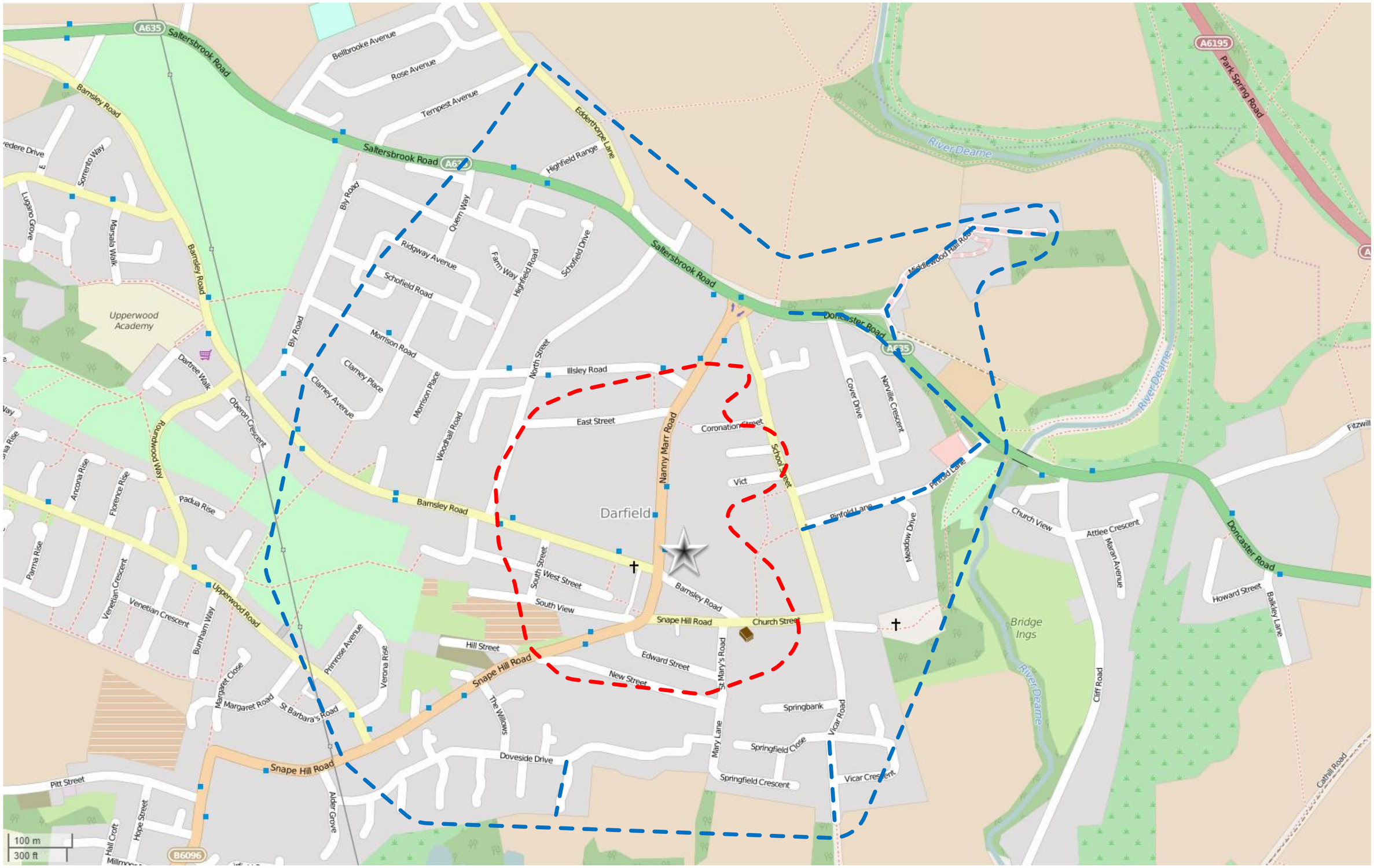
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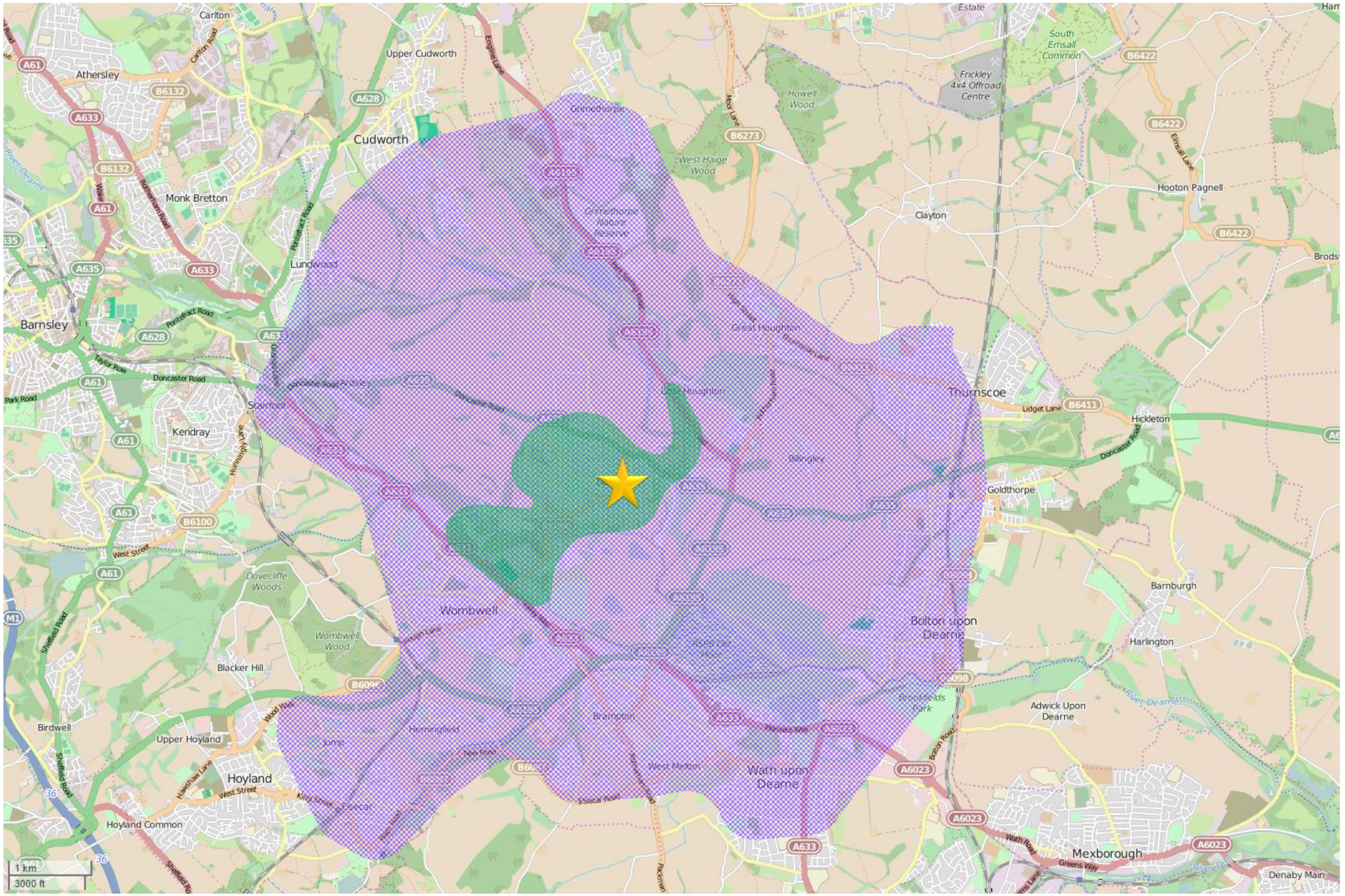
TITLE:
Proposed Site Layout

DRAWING PURPOSE:	DATE OF DRAWING:	DRAWN BY:
Planning	Jan 2017	ME
SCALE:	SHEET SIZE:	REVISION:
1:500	A2	I
PROJECT NO:	DRAWING NO:	
377	002	



TITLE ILLUSTRATIVE WALK ISOCHRONES	**NOTES** These isochrones are meant to provide an illustration of the potential extent of 400m and 800m isochrones and not intended to be precise distances	**DRAWING NO / REF** Illustrative **DESIGN** RAH	**CHECKED** AW	**REVISIONS** Rev 0	**KEY** 400m 800m

itransport PLANNING
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Title	Project	Client	Drawing No / Ref	Date	Revisions	Key
Cycle Isochrones	Nanny Marr Rd	Partner	Appendix 4	12/10/15	Rev 0	2000m 5000m
			Design: OH	Checked: AW		

Calculation Reference: AUDIT-208601-151011-1009

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

02	SOUTH EAST		
	ES	EAST SUSSEX	1 days
03	SOUTH WEST		
	DC	DORSET	1 days
04	EAST ANGLIA		
	NF	NORFOLK	1 days
05	EAST MIDLANDS		
	LN	LINCOLNSHIRE	1 days
06	WEST MIDLANDS		
	SH	SHROPSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE		
	NY	NORTH YORKSHIRE	3 days
	SY	SOUTH YORKSHIRE	1 days
08	NORTH WEST		
	GM	GREATER MANCHESTER	1 days
	LC	LANCASHIRE	1 days
09	NORTH		
	CB	CUMBRIA	1 days
10	WALES		
	CF	CARDIFF	1 days
11	SCOTLAND		
	AD	ABERDEEN CITY	1 days
	EA	EAST AYRSHIRE	1 days
	FA	FALKIRK	1 days
	PK	PERTH & KINROSS	1 days

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

Filtering Stage 2 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:	Number of dwellings
Actual Range:	22 to 59 (units:)
Range Selected by User:	20 to 60 (units:)

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/07 to 24/03/14

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	2 days
Tuesday	3 days
Wednesday	5 days
Thursday	4 days
Friday	3 days

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

Selected survey types:

Manual count	17 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 undertaking using machines.

Selected Locations:

Edge of Town Centre	1
Suburban Area (PPS6 Out of Centre)	9
Edge of Town	7

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	16
No Sub Category	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.

Filtering Stage 3 selection:

Use Class:

C3	17 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®.

Filtering Stage 3 selection (Cont.):

Population within 1 mile:

1,001 to 5,000	4 days
5,001 to 10,000	4 days
10,001 to 15,000	2 days
15,001 to 20,000	5 days
25,001 to 50,000	2 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	2 days
25,001 to 50,000	2 days
50,001 to 75,000	1 days
75,001 to 100,000	6 days
125,001 to 250,000	1 days
250,001 to 500,000	4 days
500,001 or More	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	5 days
1.1 to 1.5	12 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	16 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.

LIST OF SITES relevant to selection parameters

1 AD-03-A-01 SEMI-DETACHED ABERDEEN CITY
SPRINGFIELD ROAD

ABERDEEN
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 59
Survey date: FRIDAY 18/05/12 Survey Type: MANUAL

2 CB-03-A-03 SEMI DETACHED CUMBRIA
HAWKSHEAD AVENUE

WORKINGTON
Edge of Town
Residential Zone
Total Number of dwellings: 40
Survey date: THURSDAY 20/11/08 Survey Type: MANUAL

3 CF-03-A-03 DETACHED CARDIFF
LLANTRISANT ROAD

CARDIFF
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 29
Survey date: MONDAY 08/10/07 Survey Type: MANUAL

4 DC-03-A-01 DETACHED DORSET
ISAACS CLOSE

POOLE
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 51
Survey date: WEDNESDAY 16/07/08 Survey Type: MANUAL

5 EA-03-A-01 DETATCHED EAST AYRSHIRE
TALISKER AVENUE

KILMARNOCK
Edge of Town
Residential Zone
Total Number of dwellings: 39
Survey date: THURSDAY 05/06/08 Survey Type: MANUAL

6 ES-03-A-02 PRIVATE HOUSING EAST SUSSEX
SOUTH COAST ROAD

PEACEHAVEN
Edge of Town
Residential Zone
Total Number of dwellings: 37
Survey date: FRIDAY 18/11/11 Survey Type: MANUAL

7 FA-03-A-01 SEMI-DETACHED/TERRACED FALKIRK
MANDELA AVENUE

FALKIRK
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 37
Survey date: THURSDAY 30/05/13 Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

8 GM-03-A-10 DETACHED/SEMI GREATER MANCHESTER
BUTT HILL DRIVE
PRESTWICH
MANCHESTER
Edge of Town
Residential Zone
Total Number of dwellings: 29
Survey date: WEDNESDAY 12/10/11 Survey Type: MANUAL

9 LC-03-A-30 SEMI-DETACHED LANCASHIRE
WATSON ROAD

BLACKPOOL
Edge of Town Centre
Residential Zone
Total Number of dwellings: 24
Survey date: FRIDAY 14/06/13 Survey Type: MANUAL

10 LN-03-A-03 SEMI DETACHED LINCOLNSHIRE
ROOKERY LANE
BOULTHAM
LINCOLN
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 22
Survey date: TUESDAY 18/09/12 Survey Type: MANUAL

11 NF-03-A-01 SEMI DET. & BUNGALOWS NORFOLK
YARMOUTH ROAD

CAISTER-ON-SEA
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 27
Survey date: TUESDAY 16/10/12 Survey Type: MANUAL

12 NY-03-A-07 DETACHED & SEMI DET. NORTH YORKSHIRE
CRAVEN WAY

BOROUGHBRIDGE
Edge of Town
No Sub Category
Total Number of dwellings: 23
Survey date: TUESDAY 18/10/11 Survey Type: MANUAL

13 NY-03-A-09 MIXED HOUSING NORTH YORKSHIRE
GRAMMAR SCHOOL LANE

NORTHALLERTON
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 52
Survey date: MONDAY 16/09/13 Survey Type: MANUAL

14 NY-03-A-11 PRIVATE HOUSING NORTH YORKSHIRE
HORSEFAIR

BOROUGHBRIDGE
Edge of Town
Residential Zone
Total Number of dwellings: 23
Survey date: WEDNESDAY 18/09/13 Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

15 PK-03-A-01 DETAC. & BUNGALOWS PERTH & KINROSS
TULLYLUMB TERRACE
GORNHILL
PERTH
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 36
Survey date: WEDNESDAY 11/05/11 Survey Type: MANUAL

16 SH-03-A-05 SEMI-DETACHED/TERRACED SHROPSHIRE
SANDCROFT
SUTTON HILL
TELFORD
Edge of Town
Residential Zone
Total Number of dwellings: 54
Survey date: THURSDAY 24/10/13 Survey Type: MANUAL

17 SY-03-A-01 SEMI DETACHED HOUSES SOUTH YORKSHIRE
A19 BENTLEY ROAD
BENTLEY RISE
DONCASTER
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 54
Survey date: WEDNESDAY 18/09/13 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
DC-03-A-08	Bungalows
NY-03-A-08	Terraced

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
VEHICLES
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	17	37	0.086	17	37	0.280	17	37	0.366
08:00 - 09:00	17	37	0.159	17	37	0.393	17	37	0.552
09:00 - 10:00	17	37	0.153	17	37	0.165	17	37	0.318
10:00 - 11:00	17	37	0.135	17	37	0.145	17	37	0.280
11:00 - 12:00	17	37	0.135	17	37	0.159	17	37	0.294
12:00 - 13:00	17	37	0.132	17	37	0.123	17	37	0.255
13:00 - 14:00	17	37	0.178	17	37	0.160	17	37	0.338
14:00 - 15:00	17	37	0.170	17	37	0.220	17	37	0.390
15:00 - 16:00	17	37	0.215	17	37	0.140	17	37	0.355
16:00 - 17:00	17	37	0.303	17	37	0.186	17	37	0.489
17:00 - 18:00	17	37	0.377	17	37	0.181	17	37	0.558
18:00 - 19:00	17	37	0.241	17	37	0.124	17	37	0.365
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.284			2.276			4.560

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.

Parameter summary

Trip rate parameter range selected:	22 - 59 (units:)
Survey date date range:	01/01/07 - 24/03/14
Number of weekdays (Monday-Friday):	17
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	3

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 show. 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-208601-151011-1011

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 04 - EDUCATION
Category : B - SECONDARY
VEHICLES

Selected regions and areas:

02	SOUTH EAST		
	SC	SURREY	1 days
	WS	WEST SUSSEX	1 days
03	SOUTH WEST		
	SM	SOMERSET	1 days
05	EAST MIDLANDS		
	NR	NORTHAMPTONSHIRE	2 days
06	WEST MIDLANDS		
	WM	WEST MIDLANDS	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE		
	NE	NORTH EAST LINCOLNSHIRE	1 days
	NY	NORTH YORKSHIRE	1 days
	WY	WEST YORKSHIRE	2 days
09	NORTH		
	CB	CUMBRIA	1 days
	DH	DURHAM	1 days
	TW	TYNE & WEAR	1 days
11	SCOTLAND		
	FA	FALKIRK	1 days

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

Filtering Stage 2 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: Number of pupils
Actual Range: 456 to 1500 (units:)
Range Selected by User: 456 to 1500 (units:)

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/07 to 22/10/14

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	2 days
Wednesday	5 days
Thursday	5 days
Friday	2 days

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

Selected survey types:

Manual count	14 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 undertaking using machines.

Selected Locations:

Edge of Town Centre	1
Suburban Area (PPS6 Out of Centre)	9
Edge of Town	4

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.

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.

Filtering Stage 3 selection:

Use Class:

C2	2 days
D1	12 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 1 mile:

1,001 to 5,000	3 days
5,001 to 10,000	3 days
10,001 to 15,000	1 days
15,001 to 20,000	4 days
20,001 to 25,000	1 days
25,001 to 50,000	2 days

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

Population within 5 miles:

25,001 to 50,000	1 days
50,001 to 75,000	1 days
75,001 to 100,000	2 days
100,001 to 125,000	2 days
125,001 to 250,000	4 days
250,001 to 500,000	2 days
500,001 or More	2 days

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

Car ownership within 5 miles:

0.5 or Less	1 days
0.6 to 1.0	6 days
1.1 to 1.5	6 days
1.6 to 2.0	1 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	4 days
No	10 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.

LIST OF SITES relevant to selection parameters

1 CB-04-B-02 SECONDARY SCH. CUMBRIA
HARRINGTON ROAD

WORKINGTON
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of pupils: 624
Survey date: FRIDAY 21/11/08 Survey Type: MANUAL

2 DH-04-B-01 SECONDARY SCHOOL DURHAM
REDHILLS LANE

DURHAM
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of pupils: 1500
Survey date: MONDAY 01/12/08 Survey Type: MANUAL

3 FA-04-B-01 SECONDARY SCHOOL FALKIRK
NEWLANDS ROAD
REDDINGMUIRHEAD
FALKIRK
Suburban Area (PPS6 Out of Centre)
No Sub Category
Total Number of pupils: 1076
Survey date: THURSDAY 26/04/07 Survey Type: MANUAL

4 NE-04-B-01 SECONDARY SCHOOL NORTH EAST LINCOLNSHIRE
FOXHILLS ROAD

SCUNTHORPE
Edge of Town
Residential Zone
Total Number of pupils: 520
Survey date: MONDAY 19/05/14 Survey Type: MANUAL

5 NR-04-B-01 SECONDARY SCHOOL NORTHAMPTONSHIRE
BECKET WAY

NORTHAMPTON
Suburban Area (PPS6 Out of Centre)
No Sub Category
Total Number of pupils: 1100
Survey date: WEDNESDAY 23/05/07 Survey Type: MANUAL

6 NR-04-B-02 SECONDARY SCH. NORTHAMPTONSHIRE
NEWPORT PAGNELL ROAD
HARDINGSTONE
NORTHAMPTON
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of pupils: 770
Survey date: THURSDAY 20/11/08 Survey Type: MANUAL

7 NY-04-B-02 SECONDARY SCHOOL NORTH YORKSHIRE
FULFORDGATE
FULFORD
YORK
Edge of Town
No Sub Category
Total Number of pupils: 1300
Survey date: FRIDAY 25/09/09 Survey Type: MANUAL

8 SC-04-B-02 SECONDARY SCH. SURREY
SUMMERS ROAD
FARNCOMBE
GODALMING
Edge of Town
Residential Zone
Total Number of pupils: 456
Survey date: THURSDAY 21/10/10 Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

9 SM-04-B-01 SECONDARY SCH. SOMERSET
DURLEIGH ROAD

BRIDGWATER
Edge of Town
Residential Zone
Total Number of pupils: 1073
Survey date: WEDNESDAY 21/10/09 Survey Type: MANUAL

10 TW-04-B-01 SECONDARY SCHOOL TYNE & WEAR
SALTWELL ROAD SOUTH

GATESHEAD
Suburban Area (PPS6 Out of Centre)
No Sub Category
Total Number of pupils: 1188
Survey date: THURSDAY 03/10/13 Survey Type: MANUAL

11 WM-04-B-02 SECONDARY SCH. WEST MIDLANDS
PHILIPS STREET
ASTON
BIRMINGHAM
Edge of Town Centre
No Sub Category
Total Number of pupils: 730
Survey date: WEDNESDAY 26/09/07 Survey Type: MANUAL

12 WS-04-B-02 SECONDARY SCHOOL WEST SUSSEX
ASHDOWN DRIVE
TILGATE
CRAWLEY
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of pupils: 1327
Survey date: WEDNESDAY 28/11/07 Survey Type: MANUAL

13 WY-04-B-01 SECONDARY SCHOOL WEST YORKSHIRE
ELLERBY ROAD

LEEDS
Suburban Area (PPS6 Out of Centre)
No Sub Category
Total Number of pupils: 900
Survey date: WEDNESDAY 26/09/07 Survey Type: MANUAL

14 WY-04-B-02 SECONDARY SCHOOL WEST YORKSHIRE
WHINGATE ROAD

LEEDS
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of pupils: 1205
Survey date: THURSDAY 19/09/13 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.

TRIP RATE for Land Use 04 - EDUCATION/B - SECONDARY
VEHICLES
Calculation factor: 1 PUPILS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	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	13	1011	0.041	13	1011	0.010	13	1011	0.051
08:00 - 09:00	14	984	0.172	14	984	0.117	14	984	0.289
09:00 - 10:00	14	984	0.023	14	984	0.018	14	984	0.041
10:00 - 11:00	14	984	0.011	14	984	0.011	14	984	0.022
11:00 - 12:00	14	984	0.012	14	984	0.011	14	984	0.023
12:00 - 13:00	14	984	0.011	14	984	0.015	14	984	0.026
13:00 - 14:00	14	984	0.013	14	984	0.015	14	984	0.028
14:00 - 15:00	14	984	0.024	14	984	0.019	14	984	0.043
15:00 - 16:00	14	984	0.077	14	984	0.121	14	984	0.198
16:00 - 17:00	14	984	0.029	14	984	0.056	14	984	0.085
17:00 - 18:00	12	1006	0.015	12	1006	0.023	12	1006	0.038
18:00 - 19:00	11	1050	0.015	11	1050	0.019	11	1050	0.034
19:00 - 20:00	1	770	0.049	1	770	0.042	1	770	0.091
20:00 - 21:00	1	770	0.008	1	770	0.029	1	770	0.037
21:00 - 22:00	1	770	0.000	1	770	0.039	1	770	0.039
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.500			0.545			1.045

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.

Parameter summary

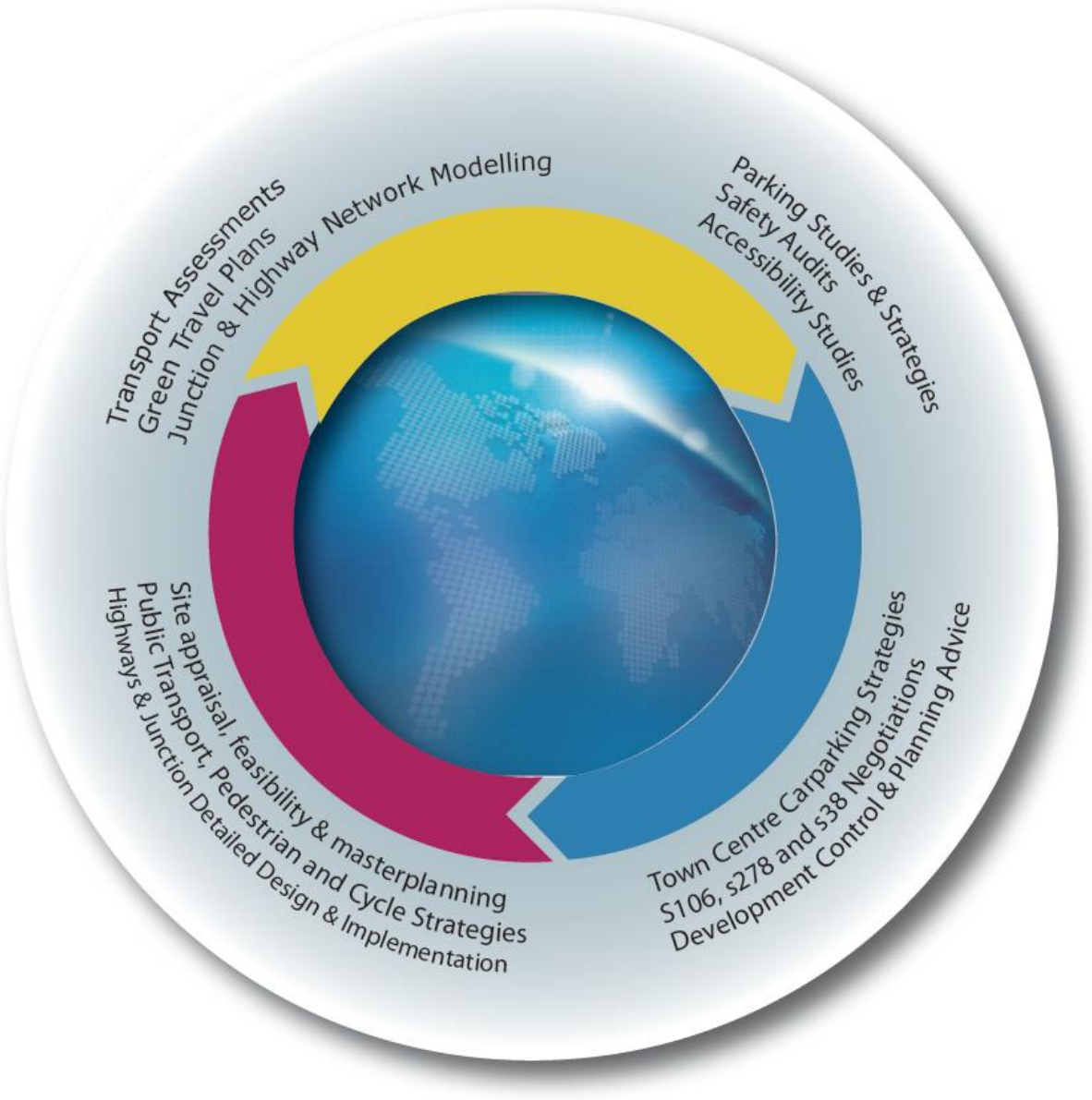
Trip rate parameter range selected:	456 - 1500 (units:)
Survey date date range:	01/01/07 - 22/10/14
Number of weekdays (Monday-Friday):	14
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	0

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 show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Creative Minds, *Intelligent Thinking*

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