Technical Note

Job Name	Land West of Whitecroft Road, Meldreth
Subject	Transport Technical Note – Local Plan Representations
Ref	18114-TN01
Date	December 2021

Introduction

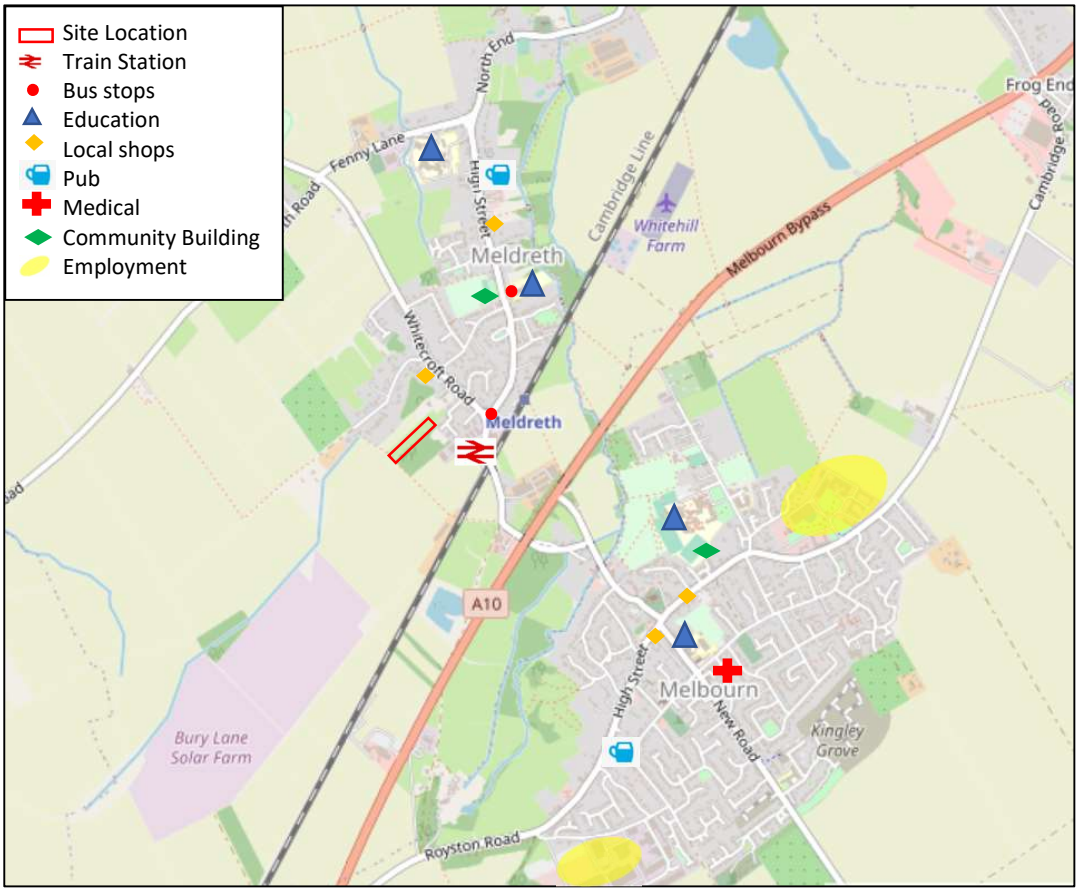
1. KMC Transport Planning have been retained by Artisan (UK) Projects Limited to provide highways and transportation advice in relation to a residential development at Land to the west of Whitecroft Road, Meldreth. The site is being promoted for 5 residential dwellings along with improvements to the existing access from Whitecroft Road.

Site Location and Accessibility

2. The site is located on the western edge of Meldreth, on the western side of Whitecroft Road. The site comprises a strip of disused field totalling approximately 0.7ha (with a further 0.15ha forming the access road) that is located to the rear of existing properties at 19, 19a, 19b, 19c, 21 and 21a Whitecroft Road. These existing properties are arranged with numbers 19 and 21 fronting Whitecroft Road and the remaining properties located off two parallel private access drives that run between numbers 19 and 21. One drive serves numbers 21 and 21a and the other serves numbers 19, 19a, 19b and 19c.

3. To the north of the site is Cam Valley Orchards and Farm Shop. To the north-east are properties No 19c and 19b and a recent residential development at Melrose. To the south is an area of scrub/woodland and to the south-west is agricultural land. **Figure 1** provides a site location plan.

Figure 1.1: Site Location Plan



Local Amenities

4. Meldreth and the adjacent village of Melbourn offer a wide range of facilities including a train station, bus stops, schools, shops, pubs, community health centre, community hub, village hall, restaurants, vets, care home, sports centre and nature reserve. The local primary school is just 750m walking distance from the site. Melbourn Village College is just a 2km walk/cycle ride. There are also a number of employment opportunities at the Melbourn Science Park and Saxon Way.

5. The extensive provision of amenities and facilities across the two villages mean that the majority of day to day needs of residents can be met locally.

Walking and Cycling

6. The National Planning Policy Framework (NPPF) does not provide any specific guidance on walking distances. Manual for Streets (MfS) states that:

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

7. **Figures 1.2** and **1.3** below provides the 10 and 30 minute walking isochrones from the site, which equate to a circa 800m and 2.4km walking distance respectively.

Figure 1.2 – 10 minute Walking Isochrone (Source: https://commutetimemap.com)

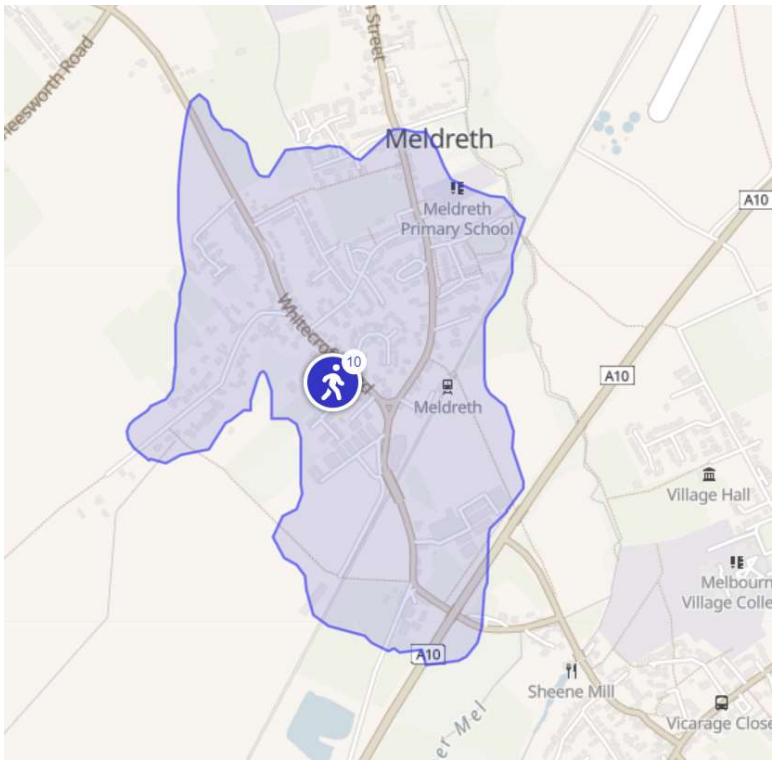
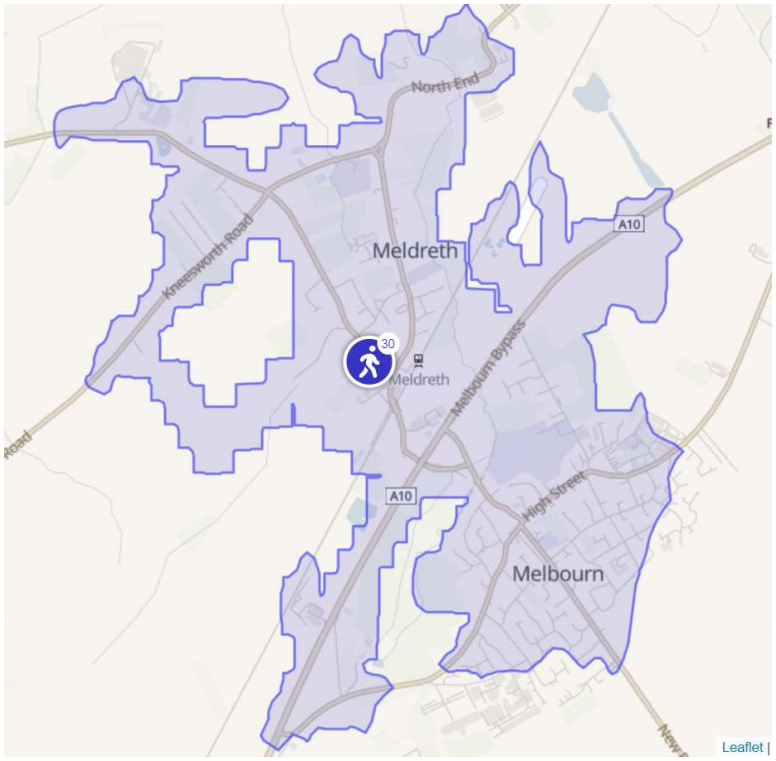


Figure 1.3 – 30 minute Walking Isochrone (Source: https://commutetimemap.com)

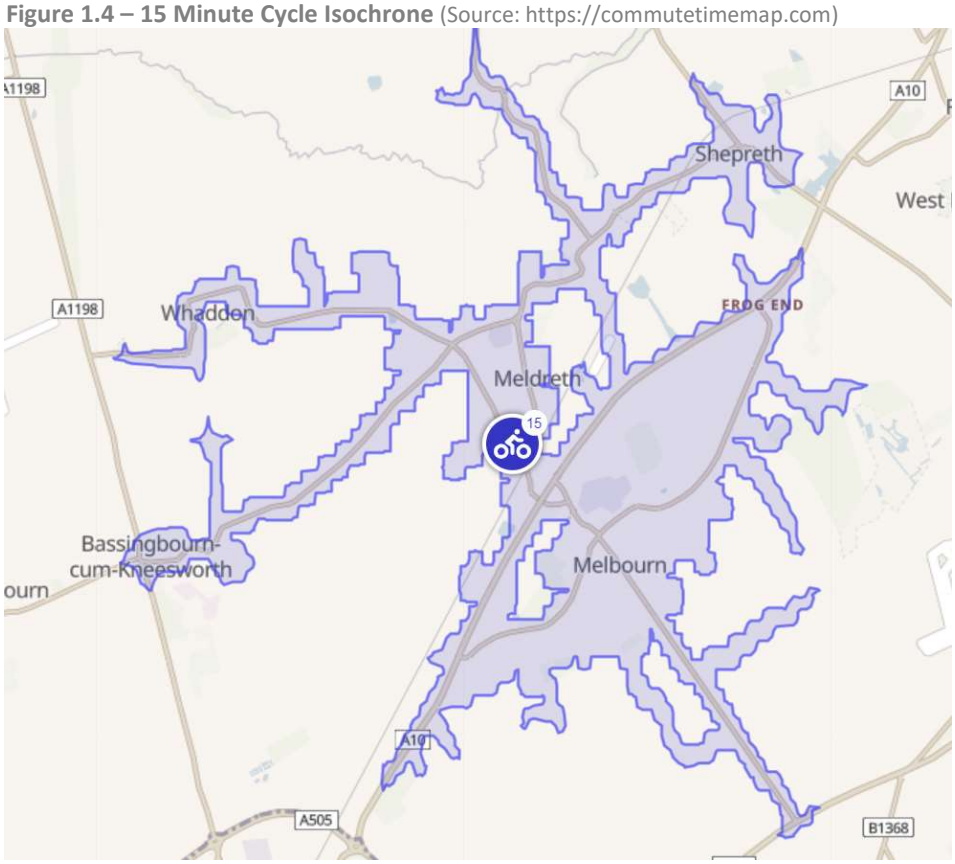


8. It can be seen from **Figure 1.2** and **1.3** that majority of Meldreth is within a 10 minute walk of the site. Extending the walk time to 30 minutes means that all of Meldreth and the majority of Melbourn is within a reasonable walking distance of the site.

9. Meldreth and Melbourn have comprehensive footway provision and the local roads are street lit. There is a continuous footway on the eastern side of Whitecroft Road. The footway on the western side of the road currently stops just south of the site at the junction of Melrose. There is a public footpath that provides a direct, traffic free walking route between Meldreth and Melbourn via the railway station.

10. Central Government research states 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. Cycling is an attractive form of travel, and it is reasonable to expect that for able-bodied people a cycle distance of 5km is readily achievable and attractive. **Figure 1.4** below shows the 15 minute cycle isochrone from the site, which is considered to be equivalent to a 5km cycle distance.

Figure 1.4 – 15 Minute Cycle Isochrone (Source: https://commutetimemap.com)



11. **Figure 1.4** demonstrates that all of Meldreth and Melbourn are within cycling distance of the site as are the surrounding villages of Shepreth, Bassingbourn-cum-Kneesworth and Whadden.

12. There is no specific cycle infrastructure in the immediate vicinity of the site, however the local roads are considered conducive to cycling. They are wide, street lit carriageways serving residential properties and generally have a flat topography. It is recognised that cycling to the surrounding villages does require cycling on rural roads which may not be attractive to all cyclists.

Public Transport

13. The nearest bus stops are located on Station Road 330m south of the site. This stop is served by route number 17 which is operated by A2B Bus & Coach. **Table 1.1** summarises the service details and frequency.

Table 1.1 – Summary of Bus Services and Frequencies

Service	Operator	Frequency		
		Mon – Fri;	Sat	Sun
17– Guilden Morden – Litlington – Bassingbourn – Meldreth – Royston	A2B Bus & Coach	1 services per day in either direction	1 services per day in either direction	-

14. The bus route only provides one service per day to Meldreth; however the village has a train station which is just 430m south of the site.

15. Meldreth train station is served by regular trains between Cambridge (2 per hour) and London Kings Cross (1 per hour), and all stops in between. The stops served on route are summarised below;

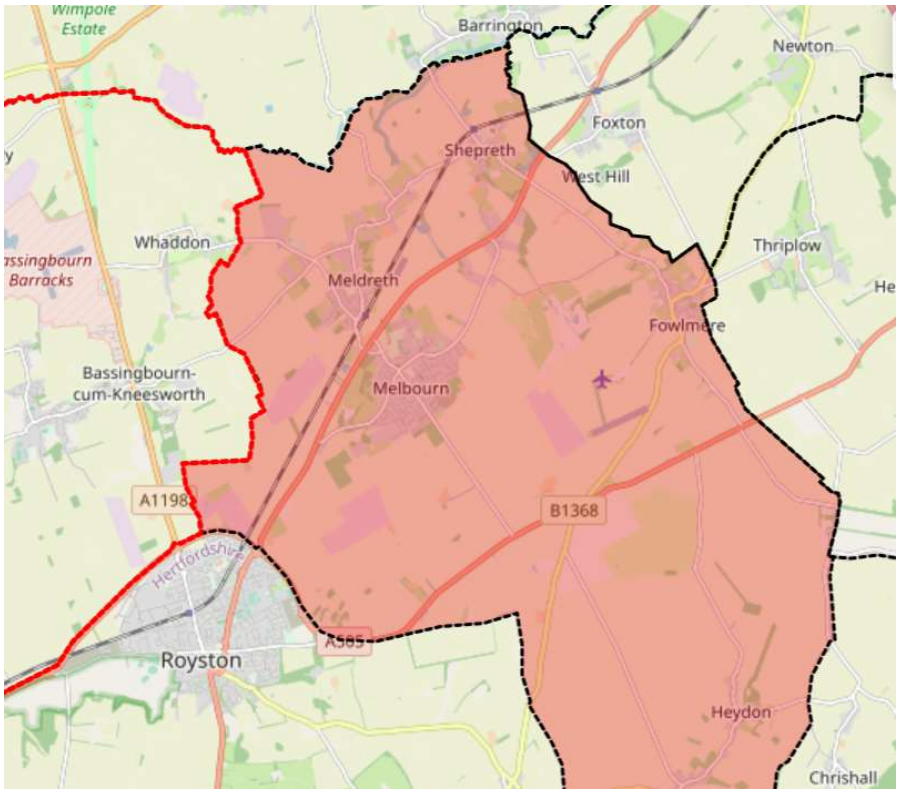
- London Kings Cross – Finsbury Park – Poters Bar – Hatfield (Herts) – Welwyn Garden City – Welwyn North – Knebworth – Stevenage – Hitchin – Letchworth Garden City – Baldock – Ashwell & Morden- Royston – Meldreth- Shrepreth – Foxton - Cambridge.

16. The journey time from Meldreth to Cambridge is 17 minutes. The journey time to London Kings Cross from Meldreth is approximately 69 minutes. A wide range of employment destinations are therefore available by sustainable modes form the site.

Current Travel Patterns

17. The 2011 Census data for Journeys to Work has been reviewed to understand how and where existing residents of the local area travel to work. The site is located in Super Output Area (SOA) South Cambridgeshire 018. This covers a large area as shown in **Figure 1.5** and includes Meldreth, Melbourn, Shepreth and Heydon.

Figure 1.5 – 2011 Census Super Output Area South Cambridgeshire 018.



18. The table below summarises the current travel to work mode share for all residents commuting from SOA South Cambridgeshire 018. 20% of residents who live in SOA South Cambridgeshire 018 also work within the SOA. The mode share for these residents has been included in the second column of **Table 1.2** .

Table 1.2 – 2011 Census SOA South Cambridgeshire 018 Mode Share for Journey to Work.

	Percentage	
Method of Travel	All workplace Destinations	Workplace Destinations within South Cambridgeshire 018.
Rail	9%	1%
Bus, minibus or coach	2%	1%
Driving a car or van	71%	47%
Passenger in a car or van	5%	4%
Cycle	4%	12%
On foot	8%	34%
Other	1%	1%

19. The Census data shows that 9% of residents travel to work by train. This reflects the fact that Meldreth is served by a train station. 12% travel on foot or by bike and 2% by bus. 5% travel as a car passenger and 71% commute by car.

20. Looking specifically at the residents who live and work within the SOA, the sustainable mode share is high with 46% travelling by bike or on foot. This demonstrates that walking and cycling to local destinations is realistic and desirable option.

Site Access

21. The site currently has access from Whitecroft Road in the form of a wide vehicle crossover, beyond which the access spits into two separate private driveways. The northern driveway serves property no. 21 and 21a The southern driveway serves property no. 19, 19a, 19b and 19c.

22. The proposals include formalising the site access from Whitecroft Road and providing a priority T junction. The junction will form a single point of access for the existing and proposed properties. The two driveways will be combined to form one access.

23. Beyond the immediate entrance the site access will reduce to a 6m shared surface street with 0.5m paved hard strip either side. This is in accordance with Cambridgeshire County Council's (CCC) document "Highway Development Management General Principles for Development (May 2021)" which states that shared surface streets can serve up to 12 dwellings. The existing and proposed properties will total 11 dwellings. The proposed site access is shown on **Drawing KMC_18114_01_B**.

24. Whitecroft Road is subject to a 30mph speed limit. In accordance with Manual for Streets (MfS) this requires a visibility spays of 2.4 x 43m from the site access. This can be achieved in either direction within highway boundary as show on **Drawing KMC_18114_01_B**.

25. In accordance with CCC's Highway Development Management General Principles for Development (May 2021) document junctions on the same side should be located a minimum of 100m apart and on the opposite side of the road should be separated by 50m. Oakrits is a cul-de-sac on the opposite side of the road and is 18.5m east of the site access. Melrose is a cul-de-sac on the same site of the road located 28m east of the site access. Whilst this does not accord with the CCC guidance, there are multiple examples on Whitecroft Road of reduced junction spacing including the successful planning application for 9 dwellings (Ref: S/0971/18/OL) which includes an access with sub-standard junction spacing.

26. The access is existing and whilst the junction spacing criteria cannot be met, the proposed development is an opportunity to consolidate what is currently a very wide informal access and provide a single, formalised point of access. This is considered to be an improvement on the existing situation as the proposed layout is more legible both to drivers and pedestrians and will therefore be safer. The scale of the proposed development is small and therefore the amount of traffic generated by the development and the additional turning movements at the site access will be low. This is discussed in more detail overleaf.

27. A new section of footway can be provided on Whitecroft Road to the south of the site access to connect to the existing footway at the junction with Melrose. This is anticipated to be a key desire line to the train station for future residents.

Delivery & Servicing

28. A refuse vehicle (and therefore fire tender) can access the site and turn in the turning head provided. Auto-tracking analysis is present on **Drawing KMC_18114_TRO1-B.** All vehicles can enter and exit the site in forward gear.

Parking Provision

29. Each dwelling will be provided with off road parking. Each dwelling will also have a garage to provide secure, covered cycle parking.

Estimated Trip Generation

30. In order to assess the impact of trips associated with the development proposals, the quantum of expected peak hour vehicular trips has been calculated. The TRICS database has been interrogated to establish likely vehicle trip rates that could be generated by up to 5 dwellings. TRICS (Trip Rate Information Computer System) is a database of trip rates for developments used in the United Kingdom for transport planning purposes, specifically to quantify the trip generation of new developments. The database is used by all industry practitioners including Developers and Local Highway Authorities. The results are presented in **Table 1.3**.

Table 1.3 – Summary of estimated vehicle trip generation

	AM Peak (08:00 – 09:00)			AM Peak (17:00 – 18:00)		
	Arr	Dep	Total	Arr	Dep	Total
Vehicle Trip Rate	0.153	0.397	0.55	0.286	0.174	0.46
Vehicle Trips	1	2	3	1	1	2

31. The TRICS database estimates that 5 dwellings would generate 3 vehicles trips in the AM peak period and 2 vehicles trips in the PM peak period. This number of vehicle trips is considered to have a negligible impact on the local highway network. The site access proposal has been designed in accordance with the scale of development proposed.

Summary

32. Meldreth is a well-served village with a very good variety of facilities, amenities and employment opportunities within walking and cycling distance of the site. The majority of day to day needs of residents can be met locally. A review of the 2011 Census Data demonstrates that walking and cycling are realistic and options for local trips.

33. Meldreth rail station is within walking distance of the site and offers sustainable travel to destinations further afield such as Cambridge and London.

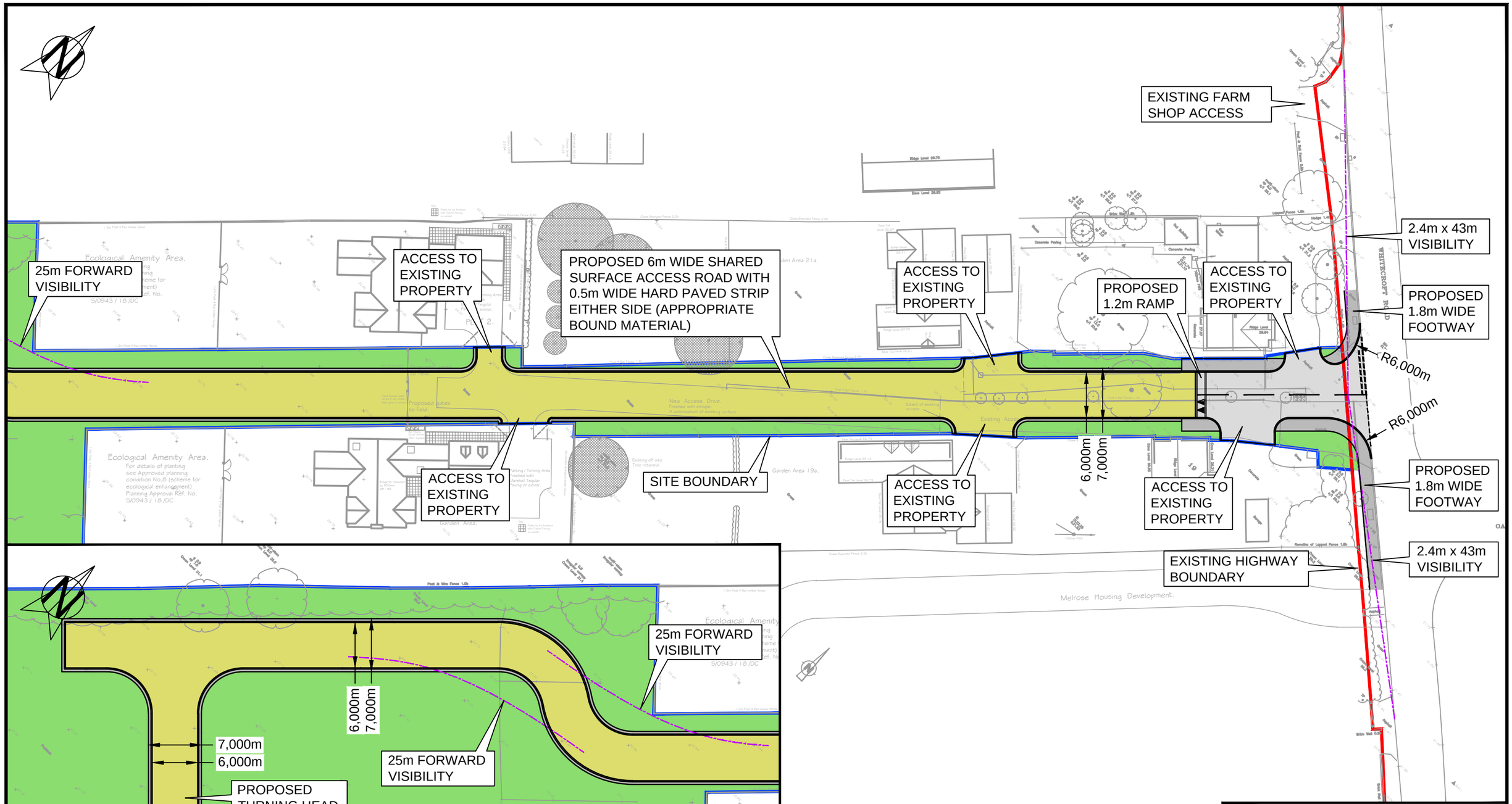
34. A development of 5 residential dwellings would be anticipated to generate 3 vehicles trips in the AM peak (08:00-09:00) and 2 vehicles trips in the PM peak (17:00-18:00). This is considered to have a negligible impact on the local highway network.

35. A site access in the form of a shared surface street in accordance with CCC's design guidance can be provided to serve the proposals (and existing properties) from Whitecroft Road. The access will be able to accommodate all vehicles associated with residential dwellings, including deliveries, emergency services and a refuse vehicle.

36. The proposed site access will be an improvement on the existing situation and also offers the opportunity to provide an additional section of footway south of the site to connect to the existing footway at Melrose.

37. The required visibility splays of 2.4m x 43m in accordance with MfS can be achieved in either direction within highway boundary.

38. Parking provided will be provided on plot and all dwellings will have safe and secure cycle parking.



NOTES:

1. (C) This drawing is copyright.
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3. Do not scale from this drawing; only figured dimensions are to be worked from.
4. Any discrepancies must be reported immediately before proceeding.
5. This drawing to be read & printed in colour.

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Client: Artisan (UK) Projects Limited	Drawing Title: Proposed Site Access Road	Drwn: DW	Issue Status: ☐ CONCEPT		
Project: Whitecroft Rd, Meldreth	Drawing Ref: KMC18114 / 002	Chkd: KMcM	■ PRELIMINARY		
	Scale @ A3: 1:500 / Rev:	Aprd: KMcM	☐ TENDER		
		Date: 08.12.2021	☐ CONSTRUCTION		
			☐ AS BUILT		
			☐ H&S FILE ISSUE		

REV	DATE	DESCRIPTION	DRN	CHKD	APRD
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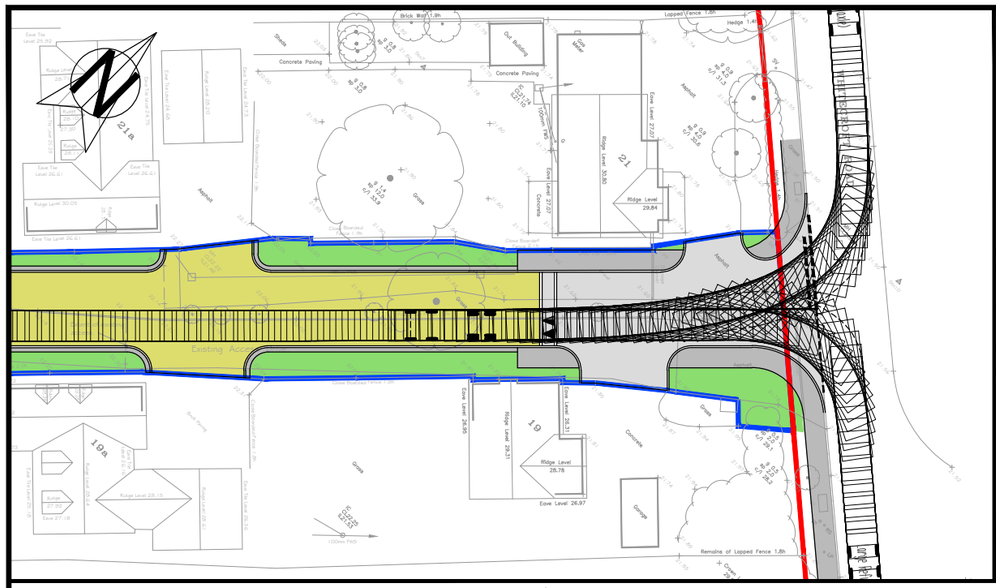

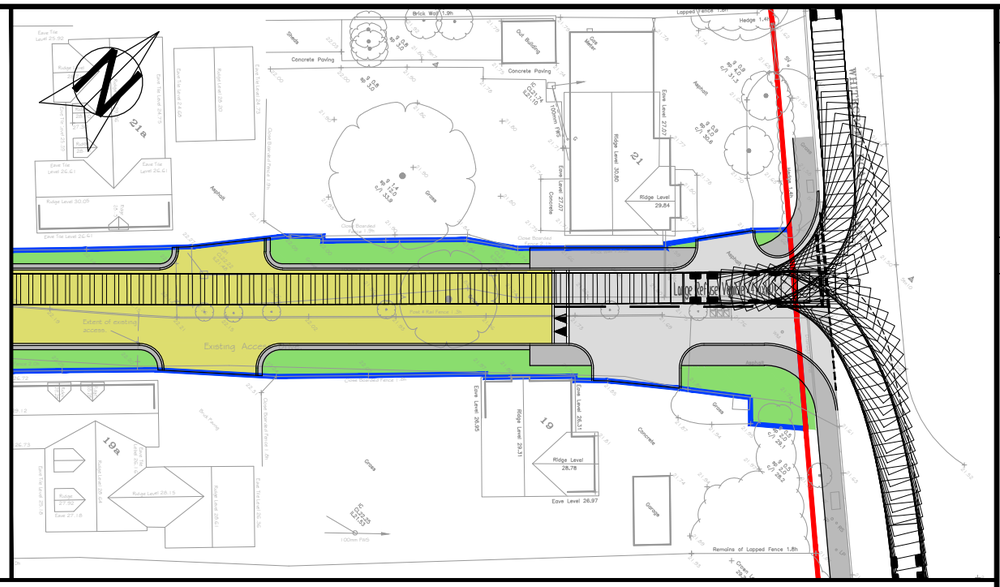

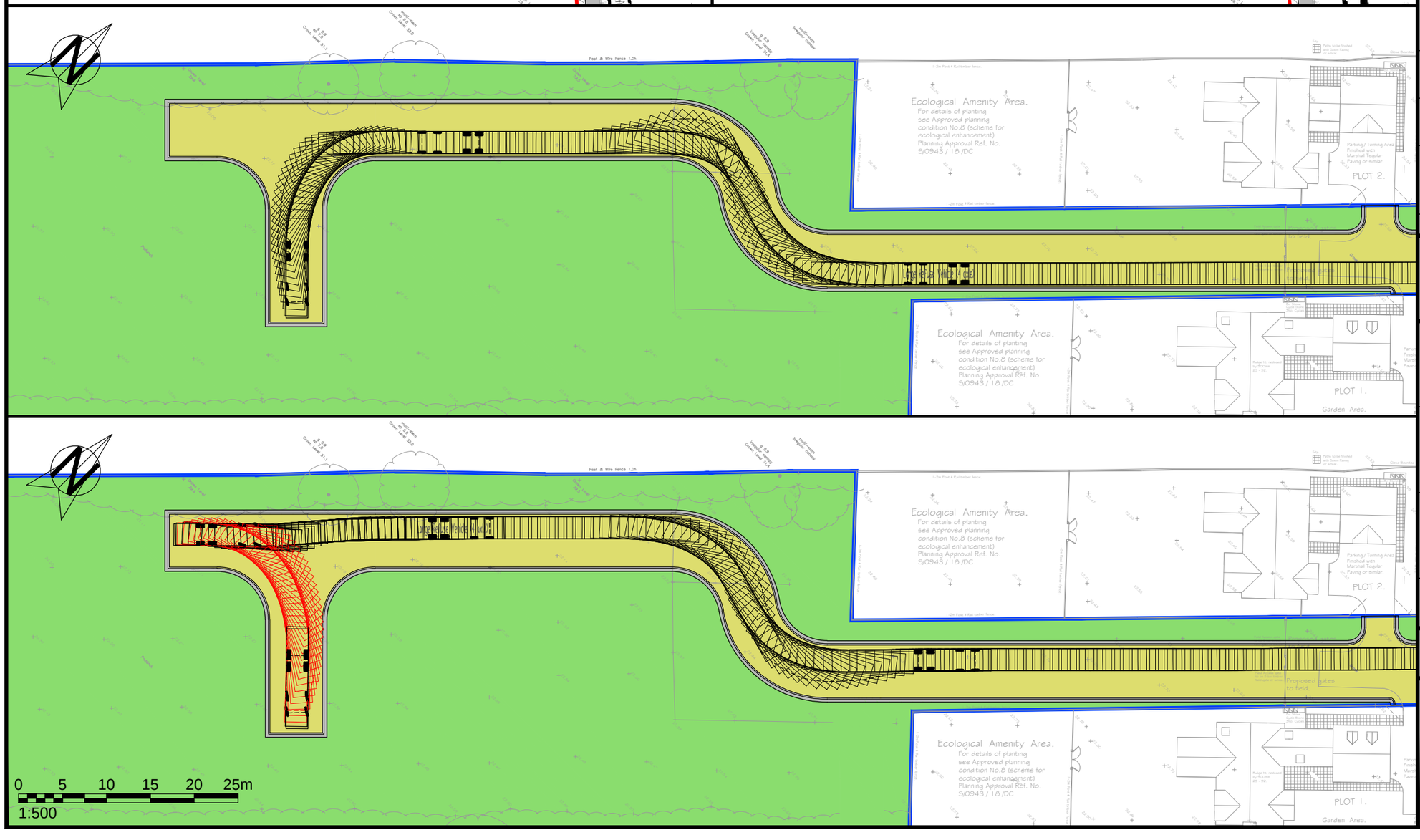

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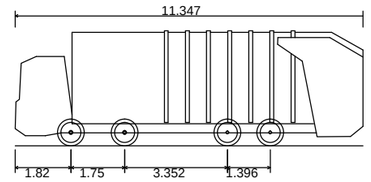
LARGE REFUSE VEHICLE (4 AXLE)



Overall Length	11.347m
Overall Width	2.500m
Overall Body Height	3.751m
Min Body Ground Clearance	0.304m
Track Width	2.500m
Lock to Lock Time	6.00s
Wall to Wall Turning Radius	11.330m

FORWARD MOVEMENTS *(design speed - 5kph)*

REVERSE MOVEMENTS *(design speed - 2.5kph)*

REV	DATE	DESCRIPTION	DRN	CHKD	APRD
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Issue Status

- [ ] CONCEPT
- [x] PRELIMINARY
- [ ] TENDER
- [ ] CONSTRUCTION
- [ ] AS BUILT
- [ ] H&S FILE ISSUE

Client

Artisan (UK) Projects Limited

Project

Whitecroft Rd, Meldreth

Drawing Title

Vehicular Swept Paths Analysis using Large Refuse Vehicle

Scale @ A3	Drwn	Chkd	Aprd	Date
1:500	DW	KMcM	KMcM	08.12.2021

Drawing Ref: KMC18114 / TR02

Rev:

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