

Transport Statement
Land at Sanderling Way
Iwade
Sittingbourne
ME9 8TE

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December 2023

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1. Introduction

RMB Consultants (Civil Engineering) Ltd has been appointed to produce a Transport Statement to support a planning application for proposed development at Land at Sanderling Way, Iwade, Sittingbourne, ME9 8TE.

A pre-application meeting was held with Kent County Council (KCC) as Highway Authority in 2018. The approach taken within this report was discussed and agreed with KCC. In particular KCC requested:

- Crash data for the local area.
- An analysis of the distribution of traffic generated by the development.
- Ensuring suitable visibility splays are available at the proposed access.

1.1 Site Location

The site is located to the north of Sanderling Way, Iwade, Figure 1.



Figure 1. Site location.

1.2 Existing Site Use

The site is currently in agricultural use. It is a greenfield site that covers 4.4ha, Figure 2.



Figure 2. Site location plan.

1.3 Proposed Site Use

An outline planning application is being made for residential development for 60 dwellings. An illustrative layout for the proposed development is shown in Figure 3.



Figure 3. Proposed development.

1.4 Planning History

A planning application was submitted in October 2018 for the site:

18/505157/OUT Outline application with all matters reserved apart from the means of access for residential development of up to 65 dwellings.

This has not been determined.

A hybrid planning application for development at Iwade was approved in July 2022.

19/503974/HYBRID Hybrid application comprising of - Outline application (all matter reserved except for access) for up to 466 dwellings and a community hall. Full planning application for access from Grovehurst Road and The Street and for a country park.

The hybrid application included a Transport Assessment (TA). This states:

5.3 To provide a worst case assessment, the total trip generation from the full Iwade Expansion (572 dwellings as set out in 'Bearing Fruits 2031') has been used for the assessment of this site. As set out above, up to 466 dwellings are proposed at East Iwade. However, using traffic flow figures for 572 dwellings ensures that the proposed site access junctions can accommodate the full Iwade Expansion, and is consistent with

the PBA spreadsheet modelling and transport impact assessment work undertaken for the Land at North West Sittingbourne sites.

The 572 dwellings set out in *Bearing Fruits 2031* include:

1. *To the north where 62 dwellings are proposed;*
2. *To the east of the village where 440 dwellings are proposed across two sites to the north-east and south-east; and*
3. *To the south, at Pond Farm, where 70 dwellings are proposed.*

The land to the north of Iwade in *Bearing Fruits 2031* refers to the proposed development that is the subject of this planning application.

Application 19/503974/HYBRID refers to this development as sites N1 and N2, Figure 4.



Figure 4. Iwade extension with the proposed development at N1 and N2.

Application 19/503974/HYBRID has the following condition relating to highways which is relevant to this application:

- 16) *Before the occupation of any dwelling in development areas E1 and N2 (as shown in figure 1.1 of the Design & Access Statement, August 2020), the off site highway works to create the access into the site from 'The Street', as indicatively shown on drawing D205/06 Rev E shall have been carried out in accordance with a design and*

*specification to be submitted and approved in writing by the Local Planning Authority.
Works shall then be implemented in accordance with the approved details.*

Reason: In the interest of highway safety.

Drawing D205/06 Rev E shows a mini-roundabout which gives access to sites N1, N2 and E1 from The Street. The drawing and associated Stage 1 Road Safety Audit plus Designer's Response are attached at Appendix A.

2. Scope

The report considers the transport effects of the existing and proposed development as follows:

Chapter 3 reviews the current national and local transport policy framework as applicable to the site.

Chapter 4 assesses the existing transport conditions.

Chapter 5 considers transport conditions as a result of the proposed development.

Chapter 6 considers a Travel Plan and initiatives that could be implemented to limit the use of cars and promote more sustainable travel options.

Chapter 7 assesses parking and the internal layout within the proposed development site.

Chapter 8 assesses the impact of the proposed development on the transport network and compliance with the national and local policy framework.

Chapter 9 provides a summary of and conclusion to the report.

3. Policy Framework

National Planning Policy Framework

The National Planning Policy Framework (NPPF) sets out the Government's planning policies for England and how these should be applied. It provides a framework within which locally-prepared plans for housing and other development can be produced.

Chapter 9 Promoting sustainable transport states:

104. *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.*

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

The following paragraphs apply when considering development proposals:

110. *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.*
111. *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.*
112. *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.*
113. *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 Transport Plan for Kent 2016-31

Local Transport Plan 4 sets out Kent's vision for 2016-2031. It identifies five policies that are targeted at delivering specific outcomes:

Outcome 1: Economic growth and minimised congestion

Policy: *Deliver resilient transport infrastructure and schemes that reduce congestion and improve journey time reliability to enable economic growth and appropriate development, meeting demand from a growing population.*

Outcome 2: Affordable and accessible door-to-door journeys

Policy: *Promote affordable, accessible and connected transport to enable access for all to jobs, education, health and other services.*

Outcome 3: Safer travel

Policy: *Provide a safer road, footway and cycleway network to reduce the likelihood of casualties, and encourage other transport providers to improve safety on their networks.*

Outcome 4: Enhanced environment

Policy: *Deliver schemes to reduce the environmental footprint of transport, and enhance the historic and natural environment.*

Outcome 5: Better health and wellbeing

Policy: *Provide and promote active travel choices for all members of the community to encourage good health and wellbeing, and implement measures to improve local air quality.*

Bearing Fruits 2031 The Swale Borough Local Plan (2017)

Policy ST1 - Delivering sustainable development in Swale states that development proposals will as appropriate;

- *Ensure the vitality of town centres by: strengthening the principal centre role of Sittingbourne.*
- *Accord with the Local Plan settlement strategy.*
- *Offer the potential to reduce levels of out-commuting and support the aims of the Swale Local Transport Strategy.*

Policy CP2 - Promoting sustainable transport states that:

New development will be located in accordance with Policy ST1 to Policy ST7, Local Plan allocations, approved Neighbourhood Plans and Community Right to Build initiatives, which minimise the need to travel for employment and services and facilitate sustainable transport. Actions by the public, private and voluntary sector will adopt an integrated approach to the provision of transport infrastructure.

Development proposals will, as appropriate:

1. *Contribute to transport network improvements, where capacity is exceeded and or safety standards are unacceptably compromised, with particular emphasis on those identified in the Infrastructure Delivery Schedule;*
2. *Make best use of capacity in the network by working together with transport providers to improve the transport network in the most sustainable way, and extending it where necessary, as demonstrated by Transport Assessments and Travel Plans in support of development proposals;*
3. *Support the provision of major new transport infrastructure in accordance with national and local transport strategies;*
4. *Maintain and improve the highway network at key points to improve traffic flows and respond to the impact of new development and regeneration, as set out in the Local Transport Strategy;*
5. *Improve safety, through measures such as adequate parking, lighting and traffic management schemes;*
6. *Achieve alternative access to all services through promoting access to sustainable forms of transport particularly bus, cycling and rail transport and improving interchange between them from the earliest stages of development;*
7. *Provide integrated walking and cycling routes to link existing and new communities with local services and facilities, public transport and the Green Grid network; and*
8. *Facilitate greater use of waterways for commercial traffic, where this would not have an unacceptable adverse environmental impact, through working with the Port of Sheerness and other bodies.*

Policy CP5 - Health and wellbeing includes the following element related to transport:

- *Promote healthier options for transport, including cycling and walking.*

Policy DM6 - Managing transport demand and impact states that:

1. *Development proposals generating a significant amount of transport movements will be required to support their proposal with the preparation of a Transport Assessment (including a Travel Plan), which will be based on the Council's most recent strategic modelling work. The Highways Agency may also require a Transport Assessment if development is deemed to impact on the strategic road network.*
2. *In assessing impacts on the highway network, development proposals will:*
 - a. *demonstrate that opportunities for sustainable transport modes have been taken up;*
 - b. *ensure that where the residual cumulative impact of development on traffic generation would be in excess of the capacity of the highway network and/or lead to a decrease in safety, environmentally acceptable improvements to the network are agreed by the Borough Council and the Highway Authority and provided. Such works will be carried out by the developer or a contribution made towards them in accordance with Policy CP6. If such works cannot be carried out and the residual*

cumulative impacts of development are severe, then the development will be refused.

- c. avoid the formation of a new direct access onto the strategic or primary distributor route network where possible, or unless identified by the Local Plan. Other proposals for new access onto the networks will need to demonstrate that they can be created in a location acceptable to the Borough Council and appropriate Highway Authority. Proposals involving intensification of any existing access onto a strategic, primary or other route will need to demonstrate that it is of a suitable capacity and safety standard or can be improved to achieve such a standard;*
 - d. integrate air quality management and environmental quality into the location and design of, and access to, development and, in so doing, demonstrate that proposals do not worsen air quality to an unacceptable degree especially taking into account the cumulative impact of development schemes within or likely to impact on Air Quality Management Areas; and*
 - e. not result in the loss of usable wharfage or rail facilities.*
- 3. The location, design and layout of development proposals will demonstrate that:*
- a. priority is given to the needs of pedestrians and cyclists, including the disabled, through the provision of safe routes which minimise cyclist/pedestrian and traffic conflict within the site and which connect to local services and facilities;*
 - b. existing public rights of way are retained, or exceptionally diverted, and new routes created in appropriate locations;*
 - c. access to public transport is integrated into site design and layout where appropriate;*
 - d. the safe and efficient delivery of goods and supplies and access for emergency and utility vehicles can be accommodated; and*
 - e. it includes facilities for charging plug-in and other ultra low emission vehicles on major developments.*

Policy DM7 - Vehicle parking states that:

Until such time as a local Swale Borough Supplementary Planning Document (SPD) can be adopted, the Council will continue to apply extant Kent County Council vehicle parking standards to new development proposals. When prepared, the Swale Vehicle Parking SPD will provide guidelines for:

- 1. Car parking standards for residential development, which will:*
 - a. take into account the type, size and mix of dwellings and the need for visitor parking; and*
 - b. provide design advice to ensure efficient and attractive layout of development whilst ensuring that appropriate provision for vehicle parking is integrated within it.*
- 2. Vehicle parking for non-residential uses, which will take into account:*
 - a. the accessibility of the development and availability of public transport;*

- b. the type, mix and use of the development proposed;
- c. the need to maintain an adequate level of car parking within town centres to ensure that viability of the centres is not compromised; and
- d. that development proposals do not exacerbate on street car parking to an unacceptable degree.

Swale Borough Council Parking Standards were adopted in May 2020.

The site is identified within the Local Plan as part of the proposed expansion of Iwade under Policy A17. The area covered by Policy A17 is shown on the Proposals Map, reproduced in Figure 5.

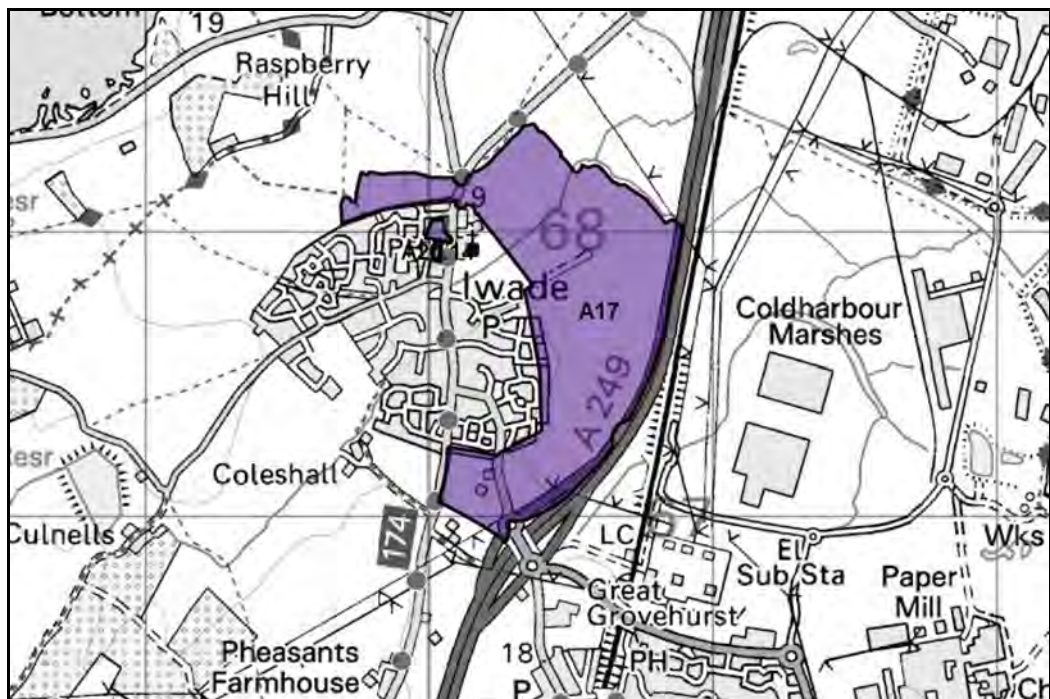


Figure 5. Policy A17.

Policy A17 includes the following concerning transport and development at north Iwade:

Planning permission will be granted for a minimum of 572 dwellings at Iwade, as shown on the Proposals Map, together with a new country park, landscape and ecological enhancements and community facilities. Landowners and developers will be required to co-ordinate on the preparation, consultation and approval of a Masterplan/development brief. The Masterplan/development brief and planning applications will:

- 7. Be supported by a Transport Assessment to determine the need and timing of improvements to the local and strategic transport networks relative to the phasing of development, whilst addressing the following:

- a. *improvements to the public transport network between Iwade and Sittingbourne, including improved services to the village;*
- b. *encouraging increased rail use from Kemsley Halt;*
- c. *securing pedestrian and cycle links within the development (housing and country park) and to the adjacent network, including to the Ridham employment area and to Sittingbourne; and*
- d. *the identification, reservation and gifting of land within relevant allocations for interim improvements (and subsequently for the remodelling) of the Grovehurst Interchange, together with the necessary and appropriate financial contributions toward such schemes as agreed.*

For north Iwade

10. *As part of the landscape strategy and ecological management plan:*

- a. *provide a substantial natural green space with copse planting, enhanced hedgerow boundaries and wetlands at the northern, eastern and western boundaries of the site to form a new, attractive northern village edge which integrates development, particularly in the wider marshland environment;*
- b. *retain the existing mature vegetation and hedgerows on the Old Ferry Road boundary;*
- c. *safeguard, create and manage ponds for biodiversity (in particular for protected species);*
- d. *provide green corridors to interrupt the mass of the development and provide additional softening in longer views from localised higher overlooking ground; and*
- e. *use low density housing to respond to the local character and distinctiveness of the village, marshlands and the local landscape character area.*

11. *Provide a primary access off The Street/Sheppey Way.*

Swale Transport Strategy 2022 - 2037

The Swale Transport Strategy's overall vision is to:

Deliver a sustainable transport network in Swale that creates an attractive, green and vibrant borough. The transport strategy will enable and encourage people to travel sustainably and actively, nurture healthy lifestyles, create less polluted places and upgrade the transport network to meet the boroughs needs.

The Strategy has six overarching objectives:

- | | |
|--------------------|--|
| Objective 1 | To promote active and sustainable travel enabling residents to take up these modes |
|--------------------|--|

- | | |
|--------------------|---|
| Objective 2 | To reduce and mitigate the impact of poor air quality related to transport whilst striving for net zero |
| Objective 3 | To improve the journey time reliability and resilience across the transport network |
| Objective 4 | To support the economic growth and development projected in the Local Plan Review |
| Objective 5 | To consider the needs of all users across the transport network |
| Objective 6 | To substantially reduce all road casualties and progress towards zero killed and seriously injured (KSI) casualties |

The following policies are relevant to the proposals:

Policy 1 - Walking

- a. *The council will enable walking in the borough by providing pleasant, safe, accessible, well connected and direct walking routes. The walking routes will be focussed within town centres, in strategic links, as well as linkages for public transport, amenities and leisure needs. Walking initiatives will also be supported and promoted to those who live, work and study in Swale.*
- b. *The council will aim to increase the walking mode share for journeys to work from 11.3% to 15% by 2038.*
- c. *To reduce severance through appropriately located crossing facilities that prioritise walking.*
- d. *Reallocate road space as necessary to provide safe walking routes.*

Policy 2 - Cycling

- a. *The council will enable cycling in the borough by providing pleasant, safe and direct cycling routes. The cycling routes will be focussed within town centres, for strategic links between urban settlements, as well as linkages for public transport, amenities, and leisure needs. cycling initiatives will also be supported and promoted to those live, work and study in Swale.*
- b. *The council will allocate road space on the network which supports bicycle journeys.*
- c. *Allocated employment sites in the Local Plan review will be required to provide cycle parking and showering facilities where occupancy is expected to be above 50 employees.*
- d. *The council will aim to increase the cycling mode share for journeys to work from 2.2% to 5% by 2038.*

Policy 3 – Bus travel

- a. *The council will enable bus travel in the borough working with the Bus Quality Partnership. Buses in Swale will be reliable, frequent, integrate well with other modes, provide sufficient coverage of the borough and will be accessible by all.*
- b. *The council will aim to increase the bus travel mode share for journeys to work from 2% to 5% by 2037.*

Policy 4 – Rail travel

- a. *The council will enable rail travel in the borough by working in partnership with rail operators and Network Rail to improve rail services, reliability, integration with other modes, facilities and information.*
- b. *The council will aim to increase the rail travel mode share for journeys to work from 6.9% to 9% by 2038.*
- c. *Improve connections for non-motorised traffic access to stations.*
- d. *To work with operators to improve facilities and accessibility at Faversham, Teynham, Kemsley and Queenborough.*

Policy 8 – Sustainable development

The council will support development which has sustainability at its core. Developments which facilitate sustainable modes of transport and minimises the need to travel will be supported. The council will resist development that does not support sustainable development.

Policy 9 – Car Sharing and Clubs

- a. *The council will support car sharing in the borough through online platforms and travel plans.*
- b. *The council will support the use of car clubs in the borough and encourage operators into the borough.*

Policy 10 – Travel Plans

The council will continue to require development proposals that have significant transport implications to have a robust travel plan that is monitored. The benefits of travel plans will be promoted to large employers in the borough who may not be obliged under planning to provide travel plans as well as in educational settings, particularly in and near AQMAs.

4. Existing Transport Conditions

4.1 Local Transport Network

Local Road Network

The site is located to the north of Sanderling Way. It has an existing access off Sanderling Way. Sanderling Way is accessed from The Street which is subject to a 30mph speed limit. The local road and rail network is shown in Figure 6.

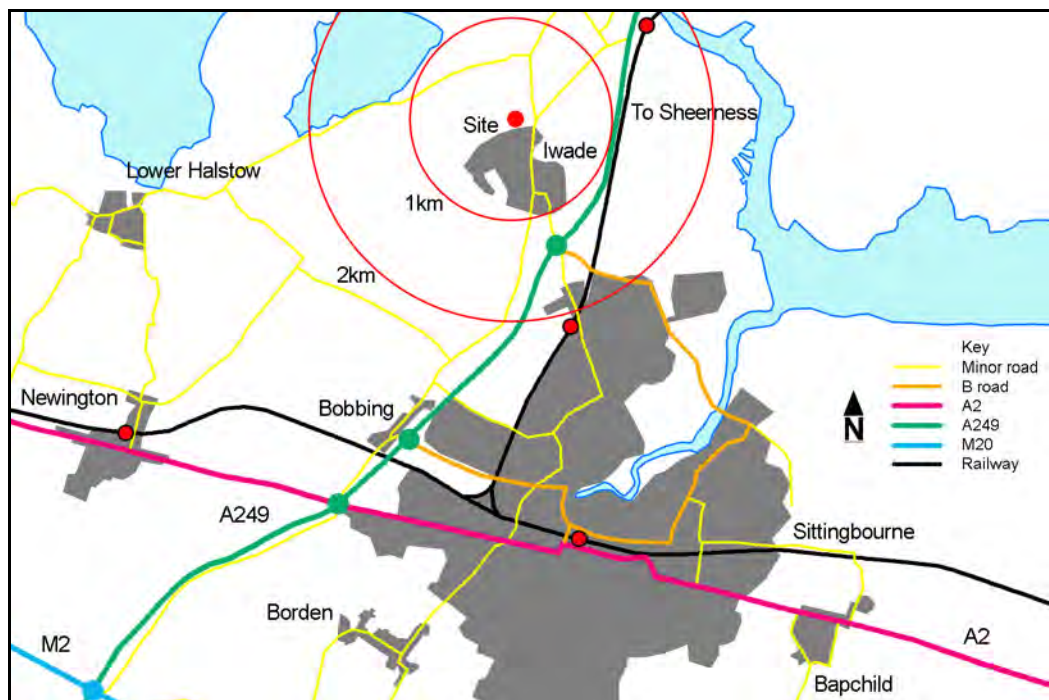


Figure 6. Local road and rail network.

Proposed Road Network Improvements

Kent County Council has been awarded £38.1million from the Housing and Infrastructure Fund to deliver highway improvements at two junctions of the A249 to the west of Sittingbourne. These are the Grovehurst Road junction with the A249 and the Key Street junction with the A249. The timescales are to complete both improvement schemes by winter 2024.

National Highways is currently delivering improvements to junction 5 of the M2. These are due for completion in 2025.

Rail Connections

The nearest railway stations to the site are at Swale, Kemsley and Sittingbourne. Swale station is 1.6km from the site, Kemsley station 2.1km and Sittingbourne station 4.3km. Swale and Kemsley give local rail access to Sittingbourne and Sheerness. High speed services are available from Sittingbourne to London with journey times from 57 minutes.

Bus Connections

The nearest bus stops are on The Street south and north of Sanderling Way, Figure 7. These bus stops are on a number of bus routes as listed in Table 1.

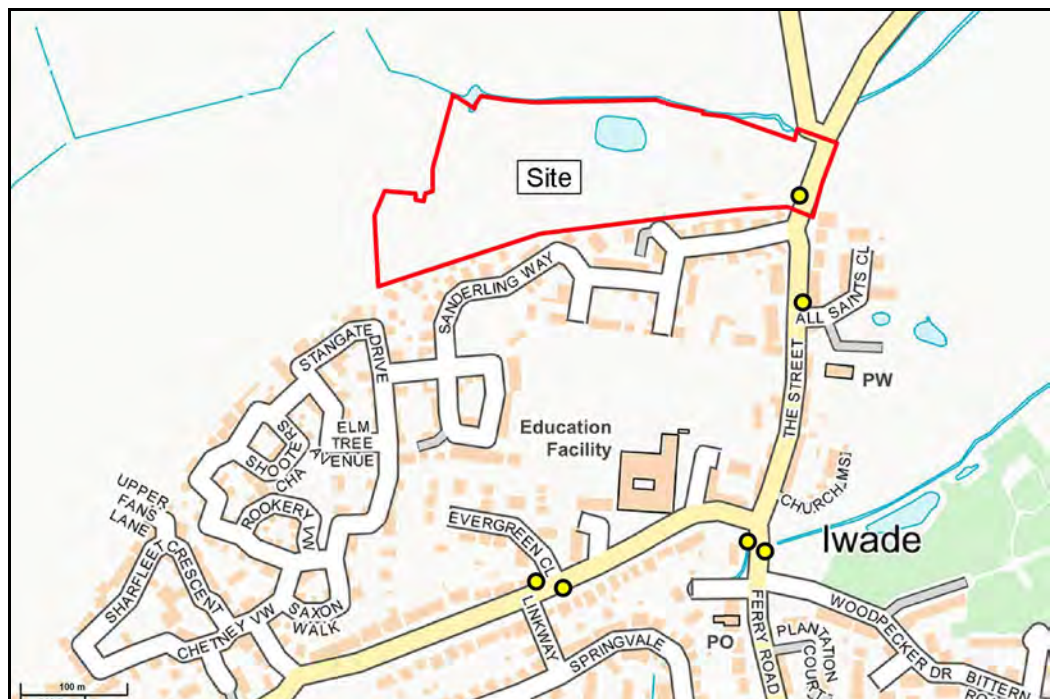


Figure 7. Local bus stops.

Route No.	Route	Frequency Weekday	Frequency Saturday	Frequency Sunday
334	Sittingbourne - Sheerness	every 30 minutes	hourly	no service
370C	Sheerness - Minster - Iwade - Sittingbourne	school service	no service	no service
370D	Leysdown - Sittingbourne	school service	no service	no service
370E	Sheerness - Sittingbourne	school service	no service	no service
370F	Sheerness - Minster - Sittingbourne	school service	no service	no service
370G	Sheerness - Queenborough - Iwade - Sittingbourne	school service	no service	no service
370H	Sheerness - Sittingbourne	school service	no service	no service
370S	Sittingbourne - West Minster	school service	no service	no service
371S	West Minster - Snipeshill	school service	no service	no service
373S	Sittingbourne - Iwade - Queenborough - Sheerness - Oasis Academy	school service	no service	no service
IB1	Sheerness - Minster - Sittingbourne Schools	school service	no service	no service
IB2	Sheerness - Minster - Sittingbourne Schools	school service	no service	no service

Table 1. Local bus routes.

Pedestrian and Cycle Connections

A public footpath (ZR91) runs through the site, Figure 8. This leads to The Street and local services within Iwade. The Street forms part of the National Cycle Route 174 which links to National Cycle Route 1 to the south, Figure 9.

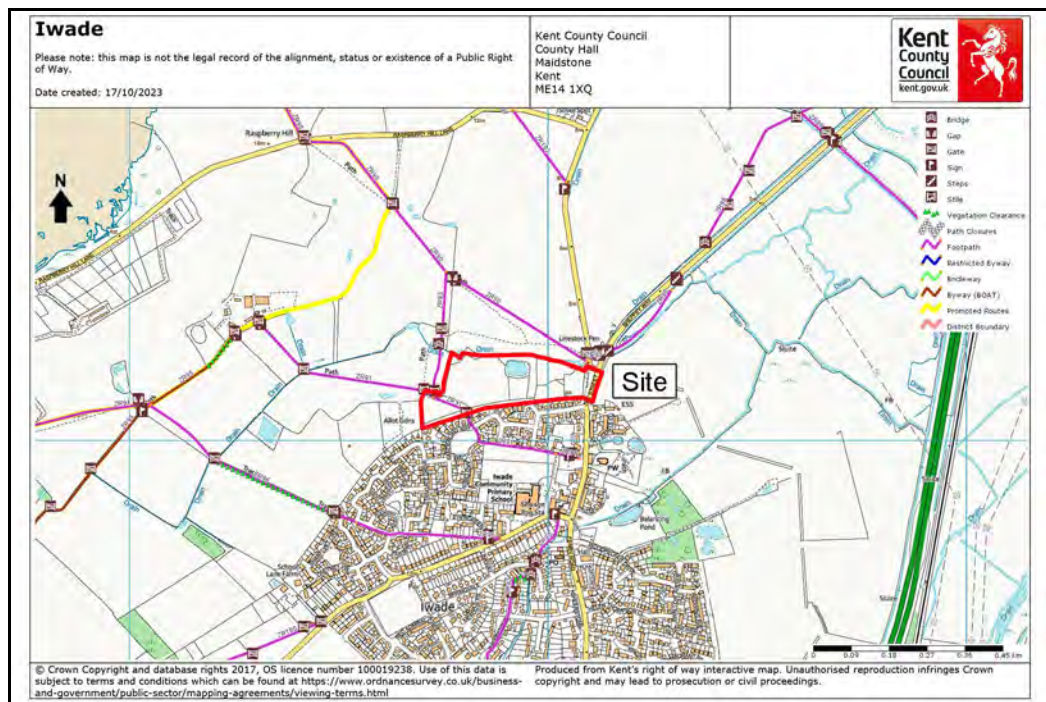


Figure 8. Local footpaths (purple) with the site edged red.



Figure 9. National cycle routes.

4.2 Accessibility

Swale Borough Council's Local Plan identifies Iwade as a Rural Local Service Centre. The role of a Rural Service Centre is defined as:

Provides most or all of the following: primary health care, education, organised sport and recreational facilities, food and other shopping, pub, post office and place of worship. Mostly, Centres accessible by frequent (hourly) bus and/or train services. Usually on main transport corridors which contributes to the range of services. Likely to be serving passing, home, visiting and surrounding rural populations for day to day services, with some sharing of services with nearby smaller settlements. Populations will travel to other centres for more major shopping, leisure and employment needs.

The Local Plan describes Iwade as follows:

Its role and character has changed dramatically with 20 years of expansion, but despite this, its local centre role is not as fully developed as others due, probably, to its closeness to Sittingbourne. The village is located close to the A249, although the Grovehurst junction requires significant upgrading, however, public transport services for the village require enhancement as do links to rail services. There is further potential to expand the village in such a way as to sensitively improve integration with the countryside and create major new areas for open space, landscape and biodiversity enhancement without significant harm to international biodiversity designations. These areas will also enable further growth to safeguard land important to the separation of the village with Sittingbourne.

Iwade lies within the area defined in the Local Plan as being accessible to most or all services, Figure 10.

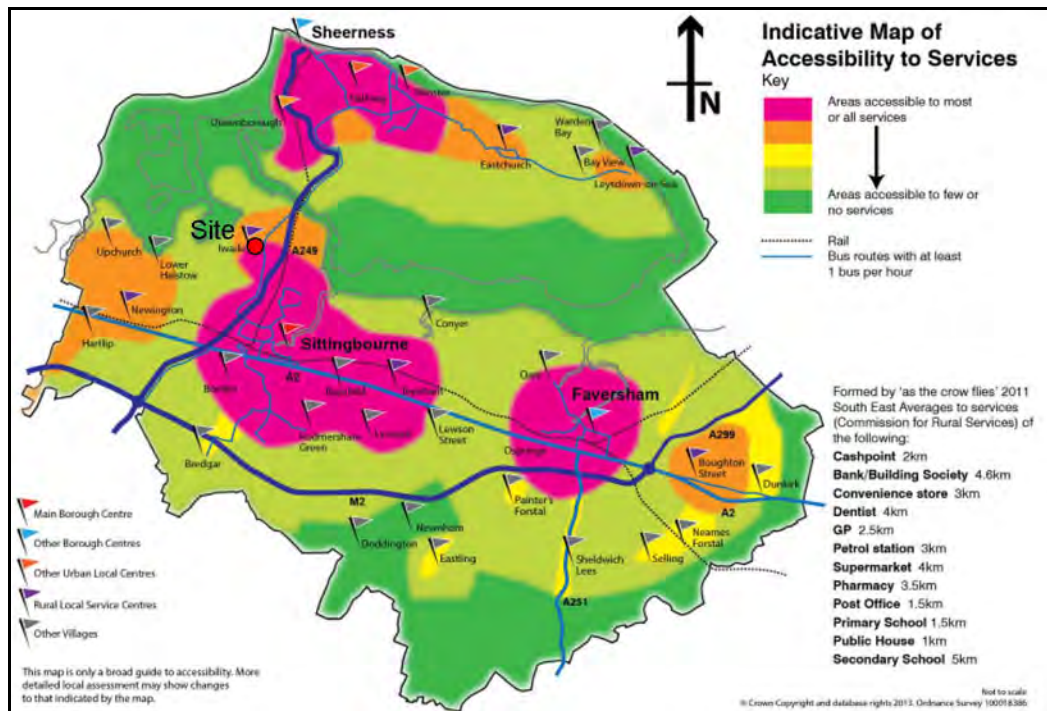


Figure 10. Accessibility to services map with site circled. (© Swale Borough Council)

TRACC, a leading multi-modal transport accessibility tool which was developed in conjunction with the Department for Transport, local authorities and transport planners, has been used to identify travel times from the site by various transport modes.

Sittingbourne and Sheerness are accessible within 30 minutes of the site using public transport, Figure 11. Chatham, Gillingham and Faversham are accessible within 45 minutes and Rochester, Canterbury and Whitstable are available within 60 minutes. These times include the time taken to walk from the site to the bus stop or railway station plus the journey time.

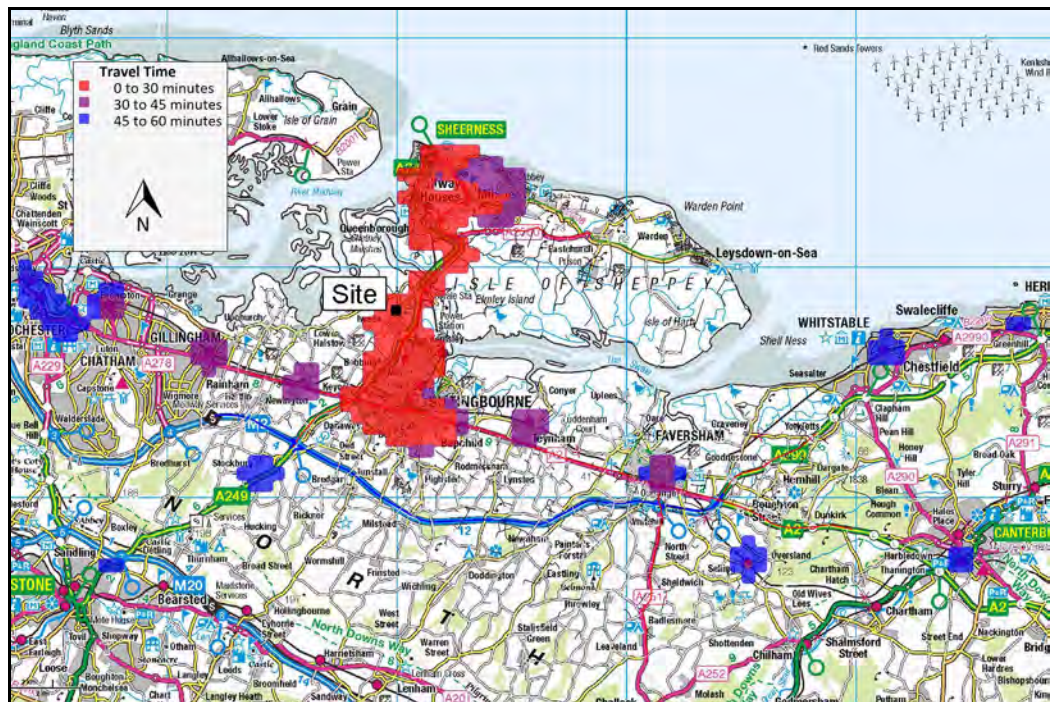


Figure 11. Areas accessible within 30 to 60 minutes of the site using public transport.

By bicycle, Swale railway station is accessible within 10 minutes and Kemsley Railway station within 15 minutes. All services in Iwade are accessible within 5 minutes, Figure 12.

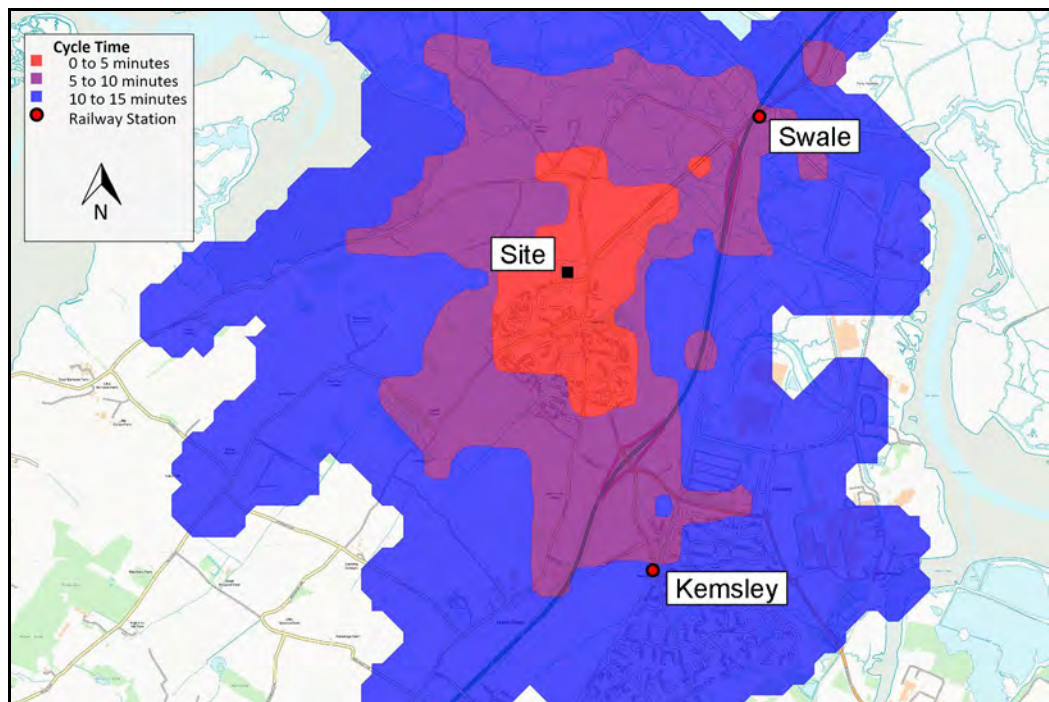


Figure 12. Areas accessible within 15 minutes of the site by bicycle.

TRACC has also been used to identify the areas that are within 400m to 1,200m walk distance of the site using roads and public footpaths. Local bus stops are within 400m of the site. Services in Iwade are within 800m of the site, Figure 13.

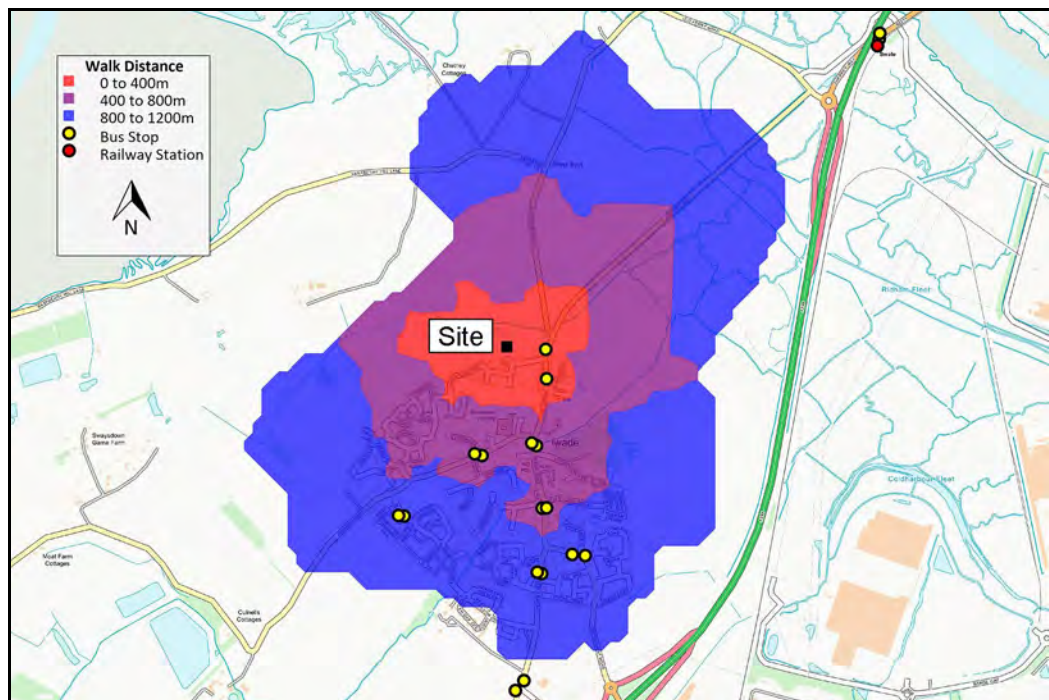


Figure 13. Areas accessible within 400m to 1,200m of the site.

The above demonstrates that the site is in an accessible location and sustainable in terms of transport options.

4.3 Traffic Generation from the Existing Site

The existing site generates limited traffic associated with agricultural use.

4.4 Existing Site Access

There is an existing access to the site from Sanderling Way.

4.5 Crash Data

Crash data has been obtained from Kent County Council covering the last three years, Appendix B. There are no crashes recorded in the vicinity of the proposed access.

5. Proposed Development

5.1 Trip Generation

The proposed development consists of 60 dwellings.

A Transport Assessment was produced for The Land East of Iwade, Sittingbourne Development which received planning permission on 29th July 2022, 19/503974/HYBRID.

The Transport Assessment states:

To provide a worst case assessment, the total trip generation from the full Iwade Expansion (572 dwellings as set out in 'Bearing Fruits 2031') has been used for the assessment of this site. As set out above, up to 466 dwellings are proposed at East Iwade. However, using traffic flow figures for 572 dwellings ensures that the proposed site access junctions can accommodate the full Iwade Expansion, and is consistent with the PBA spreadsheet modelling and transport impact assessment work undertaken for the Land at North West Sittingbourne sites.

The 572 dwellings include the 60 proposed as part of this development at North Iwade.

Traffic generation associated with the proposed development is based upon the trip rates used in The Land East of Iwade Transport Assessment. These trip rates have been used to be consistent with the wider traffic modelling carried out.

The trip rates generated by residential development are shown in Table 2.

Peak Hour	Trips per Dwelling		
	Arrive	Depart	2-way
AM (0800-0900)	0.124	0.403	0.527
PM (1700-1800)	0.367	0.205	0.572

Table 2. Trip rates for residential development.

The trips generated by a development of 60 houses is shown in Table 3.

Peak Hour	Total trips (60 dwellings)		
	Arrive	Depart	2-way
AM (0800-0900)	7.440	24.180	31.620
PM (1700-1800)	22.020	12.300	34.320

Table 3. Trips generated by the proposed development.

Based on dwelling numbers the trips generated by the proposed development represent 10.5% of the trips generated by the whole Iwade Expansion.

5.2 Traffic Distribution

The distribution of the traffic generated by the development has been assessed using census data. The dataset *Location of usual residence and place of work by method of travel to work* gives origin and destination data for journeys to work at a MSOA (Middle Layer Super Output Area) level.

The site lies within the Swale 007 area, which includes Iwade and North West Sittingbourne.

The following routes from the site are considered:

- 1 The Street North to Old Ferry Road
- 2 The Street North to the Isle of Sheppey via Sheppey Way
- 3 The Street North to the A249 via Sheppey Way
- 4 The Street South to School Lane and Iwade
- 5 The Street South to Grovehurst Road Local Traffic
- 6 The Street South to the A249 via Grovehurst Road
- 7 The Street South to Sheppey Way
- 8 The Street South to the A249 via Sheppey Way

The census dataset has been used to identify which local MSOA destinations would be served by each route, Table 4. The MSOA destinations are shown in Figure 14.

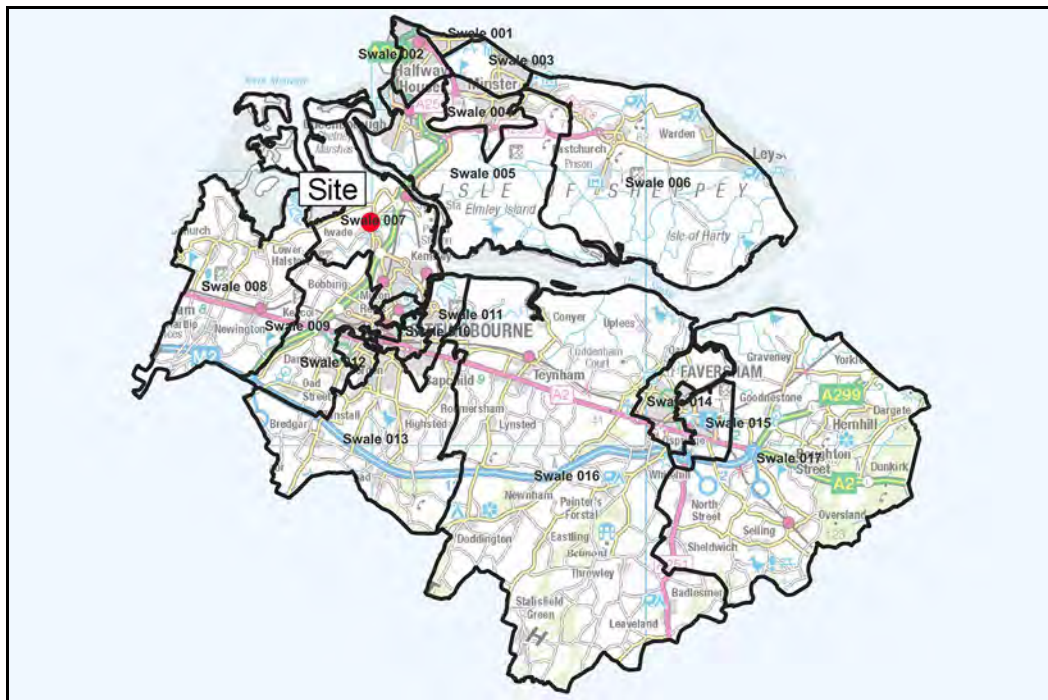


Figure 14. MSOA destinations within Swale.

The routes via the A249 are not assumed to serve the local Swale destinations. All other destinations are considered to be served by the A249.

Destination	Total car journeys	% assumed	Assumed car journeys	% of car journeys based on total of 4,284
1. The Street North to Old Ferry Road				
Swale 008	50	33	17	
Total			17	0.4%
2. The Street North to the Isle of Sheppey via Sheppey Way				
Swale 001	43	100	43	
Swale 002	84	100	84	
Swale 003	11	100	11	
Swale 004	28	100	28	
Swale 005	47	100	47	
Swale 006	76	100	76	
Total			289	6.7%
4. The Street South to School Lane and Iwade				
Swale 007	188	20	38	

Swale 008	50	33	17	
Total			55	1.3%
5. The Street South to Grovehurst Road Local Traffic				
Swale 007	188	80	150	
Swale 009	187	20	37	
Swale 010	480	80	384	
Swale 011	111	80	89	
Swale 013	196	20	39	
Swale 014	11	50	6	
Swale 015	40	50	20	
Swale 016	45	50	23	
Swale 017	9	50	5	
Total			753	17.6%
7. The Street South to Sheppey Way				
Swale 008	50	34	25	
Swale 009	187	80	38	
Swale 010	480	20	96	
Swale 011	111	20	22	
Swale 012	99	100	99	
Swale 013	196	80	157	
Swale 014	11	50	6	
Swale 015	40	50	20	
Swale 016	45	50	23	
Swale 017	9	50	5	
Total			491	11.5%
Total not using A249			1,605	37.5%

Table 4. Car journeys by local routes.

The trips using the A249 are split between three routes, Table 5.

Route	% assumed	Assumed car journeys based on 2,679	% of car journeys based on total of 4,284
3. The Street North to the A249 via Sheppey Way	20%	536	12.5%
6. The Street South to the A249 via Grovehurst Road	70%	1,875	43.8%
8. The Street South to the A249 via Sheppey Way	10%	268	6.3%
Total		2,679	62.6%

Table 5. Car journeys via A249.

These percentages have been used to split the trips generated by the development, Table 6.

Route	%	AM peak		PM peak	
		Arrive	Depart	Arrive	Depart
1. The Street North to Old Ferry Road	0.4	0.030	0.097	0.088	0.049
2. The Street North to the Isle of Sheppey via Sheppey Way	6.7	0.498	1.620	1.475	0.824
3. The Street North to the A249 via Sheppey Way	12.5	0.930	3.023	2.753	1.538
4. The Street South to School Lane and Iwade	1.3	0.097	0.314	0.286	0.160
5. The Street South to Grovehurst Road Local Traffic	17.6	1.309	4.256	3.876	2.165
6. The Street South to the A249 via Grovehurst Road	43.8	3.259	10.591	9.645	5.387
7. The Street South to Sheppey Way	11.5	0.856	2.781	2.532	1.415
8. The Street South to the A249 via Sheppey Way	6.3	0.469	1.523	1.387	0.775
	100.1	7.447	24.204	22.042	12.312

Table 6. Development trip distribution.

The distribution of these trips is shown graphically in Appendix C.

The Transport Assessment produced for The Land East of Iwade, Sittingbourne Development includes traffic modelling for 2031 including committed development and the Iwade extension of 572 dwellings. The development trip distribution is compared to the modelling outputs for 2031, Table 7.

The distribution of these trips is shown graphically in Appendix C.

Route	AM peak					
	Arrive			Depart		
	Site	Whole	% of whole	Site	Whole	% of whole
Sheppey Way North (1, 2 & 3)	1	88	1.1%	5	113	4.4%
The Street South (4, 5, 6, 7 & 8)	6	129	4.7%	19	144	13.2%
Grovehurst Road (5 & 6)	5	392	1.3%	15	702	2.1%
Sheppey Way South (7, 8)	1	188	0.5%	4	250	1.6%
	PM peak					
	Arrive			Depart		
	Site	Whole	% of whole	Site	Whole	% of whole
Sheppey Way North (1, 2 & 3)	4	119	3.4%	2	106	1.9%
The Street South (4, 5, 6, 7 & 8)	18	154	11.7%	10	143	7.0%
Grovehurst Road (5 & 6)	14	680	2.1%	8	430	1.9%
Sheppey Way South (7, 8)	4	347	1.2%	2	189	1.1%

Table 7. Development trip comparison with 2031 forecast year with Iwade extension.

The proposed development has the greatest impact on The Street southbound representing up to 13.2% of all trips. On all other links the percentage attributed to the proposed development is less than 5% and considered to be within the daily variation of traffic along these links.

6. Travel Plan

Travel Plans are most effective when drafted in partnership with the organisation that will be responsible for implementation and monitoring.

Details of the eventual occupants are not known. Consequently, any related Travel Plan can only be an interim, evolving document.

The following sets out draft measures that can be promoted as part of a Travel Plan.

Introduction

The proposed development is for 60 dwellings.

Site Assessment

The key element to promoting sustainable travel is the location of the development and its access to sustainable travel modes.

Swale Borough Council's Local Plan identifies Iwade as a Rural Local Service Centre.

Chapter 4.2 Accessibility demonstrates that the site is in a sustainable location. Residents will be able to walk to local bus stops within 400m of the site and services in Iwade are within 800m of the site.

Sittingbourne and Sheerness are accessible within 30 minutes of the site using public transport. Chatham, Gillingham and Faversham are accessible within 45 minutes and Rochester, Canterbury and Whitstable are available within 60 minutes. These times include the time taken to walk from the site to the bus stop or railway station plus the journey time. This means that public transport can be used to access all necessary services and retail requirements and a large range of employment opportunities. It shows that the site is in a sustainable location and that access to a car is unnecessary for residents to live a full and active life.

By bicycle, Swale railway station is accessible within 10 minutes and Kemsley Railway station within 15 minutes. All services in Iwade are accessible within 5 minutes.

Objectives

The objective of the Travel Plan is to encourage sustainable means of transport and to reduce car dependency.

Travel Surveys

Baseline surveys should be carried out within six months of the development being first occupied or when 75% occupancy is achieved, whichever is first.

Targets

The baseline survey information should be used to set targets over a five year period. Policies and initiatives can then be implemented to meet these targets.

Targets need to be specific. For example, reducing the travel by car to x % by x date.

Package of measures

The following measures can be implemented to promote sustainable travel:

Cycle parking - Secure, covered cycle parking will be provided in accordance with the requirements of Swale Borough Council.

Pedestrian and Cycling - To encourage new residents to take up cycling, the developer could offer each apartment a voucher worth £150 that can be used to purchase bicycles and related equipment. Discussions will be undertaken with local cycle shops to determine if, as part of this promotional scheme, they would be willing to offer further discounts on equipment and provide help and advice on maintenance and repairs.

Information - Information on cycle routes, public footpaths, and local bus and rail services will form part of any home buyer's welcome pack. The health benefits of walking and cycling will be promoted as part of this material.

Broadband - Broadband internet connections will facilitate home working.

Promotion - The developer should appoint a travel plan co-ordinator who will be responsible for implementing, progressing, promoting, and monitoring the Travel Plan. They will be the main point of contact for residents and will liaise with key stakeholders such as Kent County Council.

Management

A Travel Plan co-ordinator should be appointed by the developer. They would be responsible for implementing, reviewing and monitoring the Travel Plan.

Monitoring

Monitoring should be undertaken to ensure the site achieves the Travel Plan targets and objectives agreed. Further surveys should be carried out after one year of implementing the Travel Plan to monitor its success against the targets. This information should then be made available to residents.

Action plan

This is a key part of the Travel Plan and should be developed in conjunction with the Travel Plan Co-ordinator. It will give a programme for delivering the measures and a means of communicating to residents. It should be concise and focus on the delivery of the Travel Plan measures and include short/medium/long-term actions, timescales and responsibilities.

7. Parking and Internal Layout

7.1 Car Parking

The proposed development will incorporate car parking in accordance with the Swale Borough Council Parking Standards May 2020. The standards state:

As detailed throughout this SPD, the key to providing suitable parking is to take a flexible approach. The standards detailed below are therefore 'Advisory' and 'Recommended' in nature.

'Advisory' standards have been provided where the accessibility of the locations is likely to justify a reduced provision than that detailed. This should, however, be supported by clear evidence and where necessary contributions to other sustainable transport modes to encourage reduced car ownership for residents, as detailed in Note 1.

'Recommended' standards have been applied to more rural locations and those where wider parking controls are limited. In these instances, the recommended standard should be adhered to as opportunities for sustainable transport measures are likely to be more restricted in nature. Should the developer propose significant measures to encourage the usage of sustainable transport (such as through the provision of a Car Club or dedicated bus service), reduced parking may be acceptable.

The parking standards based on a suburban development location are shown in Table 8.

House/Flat	Spaces per unit
1/2 bed flat	1
2 bed house	1 - 2
3 bed house	2 - 3
4+ bed house	3+
Visitor parking	0.2

Table 8. Swale Borough Council residential car parking standards.

The mix of units shown on the indicative layout is shown in Table 9.

House/Flat	Units	Spaces per unit	Spaces required
1/2 bed flat	6	1	6
2 bed house	6	1 - 2	6 - 12
3 bed house	39	2 - 3	78 - 117
4+ bed house	9	3+	27
Dwelling Total	60	-	117 - 162
Visitor spaces	60	0.2	12
Space Total	-	-	129 - 174

Table 9. Unit mix and development parking requirements.

The following drawing, attached at Appendix D shows the car parking provided:

789/210A Car Parking Layout

A parking schedule is also provided in Appendix D.

The illustrative layout shows 142 parking spaces for residents and 12 parking spaces for visitors. This is in accordance with the Swale Borough Council Parking Standards May 2020.

7.2 Cycle Parking

The Swale Borough Council Parking Standards May 2020 also give minimum cycle parking standards. Houses require one space per bedroom, flats require one space per unit. The standards state:

- Cycle parking provision should normally be provided within the curtilage of the residential dwelling. Where a garage is provided it should be of a suitable size to accommodate the required cycle parking provision.*
- Parking provision should be provided as a secure communal facility where a suitable alternative is not available.*

Cycle parking will be provided as part of the garage/car barn or within a secure store in the rear gardens. There is sufficient space within rear gardens to provide a cycle storage shed to meet the requirements of the Swale Borough Council Parking Standards May 2020.

7.3 Internal Layout

A single vehicle access to the site is proposed from The Street. Pedestrian access will be available from The Street and at two points along Sanderling Way, one on the line of the existing footpath, Figure 15.

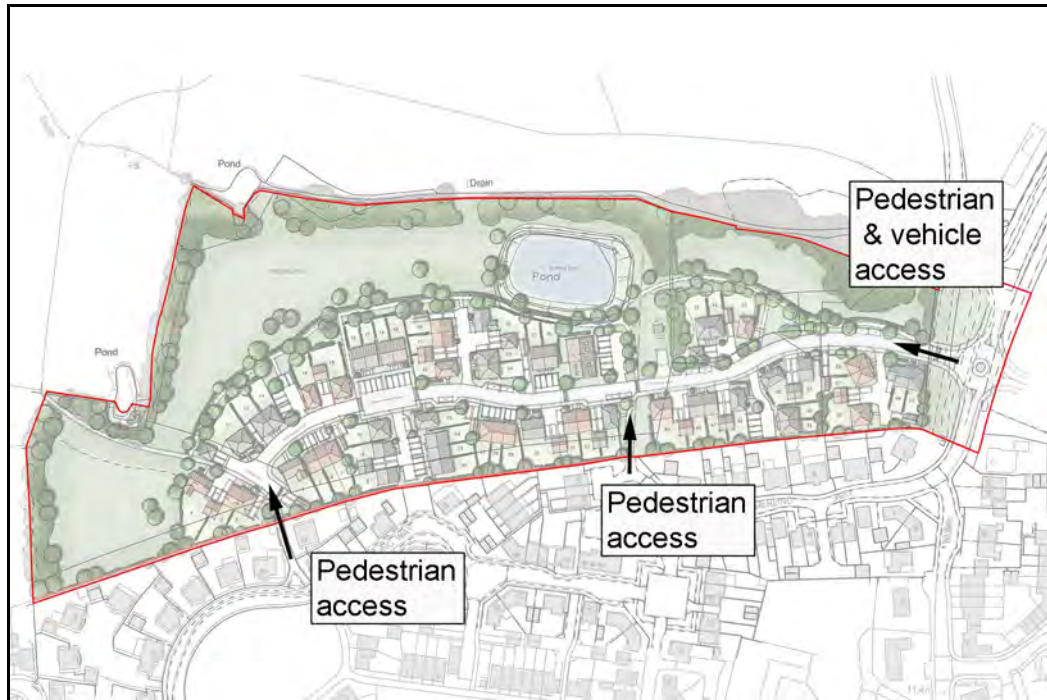


Figure 15. Development access points.

Local Plan Policy A17 - 11 states that for development at north Iwade the primary access should be provided off The Street/Sheppey Way.

Vehicle access will be via a mini-roundabout access approved as part of The Land East of Iwade, Sittingbourne Development which received planning permission on 29th July 2022, 19/503974/HYBRID. The carriageway will be 5.5m wide with a 2m wide footway to each side. Drawing D205/06 Rev E shows the mini-roundabout. The drawing and associated Stage 1 Road Safety Audit plus Designer's Response are attached at Appendix A.

Visibility plays suitable for speeds of 30mph are available at the proposed access over land under the applicant's control, land under the control of the applicant for the hybrid application or the public highway. The visibility plays at the proposed access are shown on the following drawing attached at Appendix E:

789/211A Visibility Splays at the Access

Access to the development has been assessed for an 11.4m long refuse vehicle. The swept path analysis is shown on the following drawings attached at Appendix F:

789/212A Swept Path Analysis - Access

789/213A Swept Path Analysis - Turning

8. Impact on the Transport Network and Compliance with Transport Policy

8.1 Impact on the Local Transport Network

The proposed development will generate 31 AM peak hour vehicle movements and 34 PM peak hour vehicle movements. These movements are combined two-way movements.

The proposed development has the greatest impact on The Street southbound representing up to 13.2% of all trips. On all other links the percentage attributed to the proposed development is less than 5% and considered to be within the daily variation of traffic along these links.

The TA submitted for the hybrid planning application for development at Iwade, approved in July 2022, states:

5.3 *To provide a worst case assessment, the total trip generation from the full Iwade Expansion (572 dwellings as set out in 'Bearing Fruits 2031') has been used for the assessment of this site. As set out above, up to 466 dwellings are proposed at East Iwade. However, using traffic flow figures for 572 dwellings ensures that the proposed site access junctions can accommodate the full Iwade Expansion, and is consistent with the PBA spreadsheet modelling and transport impact assessment work undertaken for the Land at North West Sittingbourne sites.*

The 572 dwellings set out in *Bearing Fruits 2031* include:

1. *To the north where 62 dwellings are proposed;*
2. *To the east of the village where 440 dwellings are proposed across two sites to the north-east and south-east; and*
3. *To the south, at Pond Farm, where 70 dwellings are proposed.*

The land to the north of Iwade in *Bearing Fruits 2031* refers to the proposed development that is the subject of this planning application. The traffic modelling carried out for the hybrid application included trips generated by the proposed development.

The committee report for the hybrid application includes Kent Highway's response to the application:

Concluding Summary - Subject to the inclusion of the following conditions and Section 106 contributions being secured, the Highway Authority would raise no objection to the application being recommended for approval.

Conditions related to the following are included below: a construction management plan; no occupation of units accessing to Grovehurst Road prior to the relevant highway works being

completed; no occupation of units accessing to The Street prior to the relevant highway works being completed; reserved matters details to show details of areas for parking and manoeuvring of vehicles in accordance with adopted parking SPD; cycle facilities being provided; works between dwellings and adopted highway provided prior to the occupation of the relevant unit; details of connections between the site and Fulmer Avenue and Swallow Avenue; details of improvements to pedestrian / cycle facilities along Sheppey Way; land required for Grovehurst Junction improvements made available to the Highway Authority at nil cost; no occupation until contract awarded for Grovehurst/A249 interchange improvements; and details contained in Travel Plan to be implemented.

Application 19/503974/HYBRID has the following condition relating to highways which is relevant to this application:

- 16) *Before the occupation of any dwelling in development areas E1 and N2 (as shown in figure 1.1 of the Design & Access Statement, August 2020), the off site highway works to create the access into the site from 'The Street', as indicatively shown on drawing D205/06 Rev E shall have been carried out in accordance with a design and specification to be submitted and approved in writing by the Local Planning Authority. Works shall then be implemented in accordance with the approved details.*

Reason: In the interest of highway safety.

Drawing D205/06 Rev E shows a mini-roundabout which gives access to the proposed development.

The impact of the proposed development on the local transport network is considered to be negligible given the following planned improvement works:

- Improvements to the Grovehurst Road junction with the A249
- Improvements to the Key Street junction with the A249
- Improvements to junction 5 of the M2
- Mini-roundabout access to the proposed development

8.2 Compliance with Transport Policy

The proposed development is considered alongside the requirements of national and local transport policy.

National Planning Policy Framework

Paragraph 110 of the NNP requires development to ensure that:

- a) *appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;*

Pedestrian links to existing footpaths and footways will be created as part of the proposed development. Local bus stops are within 400m of the site. Services in Iwade, including a primary school are within 800m of the site. The development location therefore encourages walking. By bicycle, Swale railway station is accessible within 10 minutes and Kemsley Railway station within 15 minutes. All services in Iwade are accessible within 5 minutes. Sittingbourne and Sheerness are accessible within 30 minutes of the site using public transport. Chatham, Gillingham and Faversham are accessible within 45 minutes and Rochester, Canterbury and Whitstable are available within 60 minutes. These times include the time taken to walk from the site to the bus stop or railway station plus the journey time. The above demonstrates that the site is in an accessible location and sustainable in terms of transport options.

- b) *safe and suitable access to the site can be achieved for all users; and*

The proposed pedestrian and vehicle access to the site have been demonstrated to be safe and suitable for all users.

- 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.*

The impacts of committed development within Iwade will be mitigated by the following planned improvement works:

- Improvements to the Grovehurst Road junction with the A249
- Improvements to the Key Street junction with the A249
- Improvements to junction 5 of the M2
- Mini-roundabout access to the proposed development

The proposed development will generate 31 AM peak hour vehicle movements and 34 PM peak hour vehicle movements. These movements are combined two-way movements.

The proposed development has the greatest impact on The Street southbound representing up to 13.2% of all trips. On all other links the percentage attributed to the proposed development is less than 5% and considered to be within the daily variation of traffic along these links.

With the proposed improvement works the impact of the proposed development on the local transport network is considered to be negligible.

Paragraph 111 states that:

111. *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.*

This Transport Statement demonstrates that the traffic generated by the proposed development can be accommodated within the wider highway network through the improvements proposed.

There are no crashes recorded in the vicinity of the proposed access. The proposed development will generate 31 AM peak hour vehicle movements and 34 PM peak hour vehicle movements. These movements are combined two-way movements. The proposed development has the greatest impact on The Street southbound representing up to 13.2% of all trips. On all other links the percentage attributed to the proposed development is less than 5% and considered to be within the daily variation of traffic along these links.

The development will not create an unacceptable impact on highway safety and the cumulative impacts on the road network will not be severe. The development is acceptable under the NPPF.

Local Transport Plan for Kent 2016-31

The site is within 400m of bus stops and has access to the local footpath and cycle route network. Residents will be able to access local services by walking in Iwade and district services by public transport. This promotes active travel choices to encourage good health and wellbeing in accordance with Outcome 5: Better health and wellbeing of Kent County Council's Local Transport Plan 4 2016-2031.

Bearing Fruits 2031 The Swale Borough Local Plan (2017)

Swale Borough Council's Local Plan identifies Iwade as a Rural Local Service Centre and states that *there is further potential to expand the village*. The development is in accordance with Policy ST1 as it *accords with the Local Plan settlement strategy*.

The location of the development will allow residents to access services in Iwade by walking. Connections will be made from the site to existing walking and cycling routes. This promotes *healthier options for transport, including cycling and walking* in accordance with Policy CP5. Local bus stops are within 400m of the development, Swale station is 1.6km from the site, Kemsley station 2.1km and Sittingbourne station 4.3km. The development location therefore promotes *access to sustainable forms of transport* in line with Policies CP2 and DM6.

Car parking will be provided in accordance with Policy DM7 and the Swale Borough Council's Parking Standards May 2020.

The site is identified within the Local Plan as part of the proposed expansion of Iwade. Local Plan Policy A17 - 11 states that for development at north Iwade the primary access should be provided off The Street/Sheppey Way. This is proposed via a mini-roundabout already approved under application 19/503974/HYBRID.

9. Conclusion

RMB Consultants (Civil Engineering) Ltd has been appointed to produce a Transport Statement to support a planning application for proposed development at Land at Sanderling Way, Iwade, Sittingbourne, ME9 8TE.

The site is currently in agricultural use. It is a greenfield site that covers 4.4ha. An outline planning application is being made for residential development for 60 dwellings.

A planning application was submitted in October 2018 for the site:

18/505157/OUT *Outline application with all matters reserved apart from the means of access for residential development of up to 65 dwellings.*

This has not been determined.

A hybrid planning application for development at Iwade was approved in July 2022.

19/503974/HYBRID *Hybrid application comprising of - Outline application (all matter reserved except for access) for up to 466 dwellings and a community hall. Full planning application for access from Grovehurst Road and The Street and for a country park.*

The hybrid application included a Transport Assessment which assessed the traffic impact from 572 dwellings to accommodate the full Iwade Expansion. The 60 dwellings of this proposed development were included in the assessment. The hybrid application identified a mini-roundabout on The Street to give access to the proposed development.

Swale Borough Council's Local Plan identifies Iwade as a Rural Local Service Centre and states that *there is further potential to expand the village*. Iwade lies within the area defined in the Local Plan as being accessible to most or all services. The site is identified within the Local Plan as part of the proposed expansion of Iwade, Policy A17.

Sittingbourne and Sheerness are accessible within 30 minutes of the site using public transport. Chatham, Gillingham and Faversham are accessible within 45 minutes and Rochester, Canterbury and Whitstable are available within 60 minutes. These times include the time taken to walk from the site to the bus stop or railway station plus the journey time. By bicycle, Swale railway station is accessible within 10 minutes and Kemsley Railway station within 15 minutes. All services in Iwade are accessible within 5 minutes. Local bus stops are within 400m of the site. Services in Iwade, including a primary school are within 800m of the site. The development location therefore encourages walking. The above demonstrates that the site is in an accessible location and sustainable in terms of transport options.

The proposed development will generate 31 AM peak hour vehicle movements and 34 PM peak hour vehicle movements. These movements are combined two-way movements.

The proposed development has the greatest impact on The Street southbound representing up to 13.2% of all trips. On all other links the percentage attributed to the proposed development is less than 5% and considered to be within the daily variation of traffic along these links.

The impact of the proposed development on the local transport network is considered to be negligible given the following planned improvement works:

- Improvements to the Grovehurst Road junction with the A249
- Improvements to the Key Street junction with the A249
- Improvements to junction 5 of the M2
- Mini-roundabout access to the proposed development

The illustrative layout shows 142 parking spaces for residents and 12 parking spaces for visitors. This is in accordance with the Swale Borough Council Parking Standards May 2020.

Cycle parking will be provided as part of the garage/car barn or within a secure store in the rear gardens. There is sufficient space within rear gardens to provide a cycle storage shed to meet the requirements of the Swale Borough Council Parking Standards May 2020.

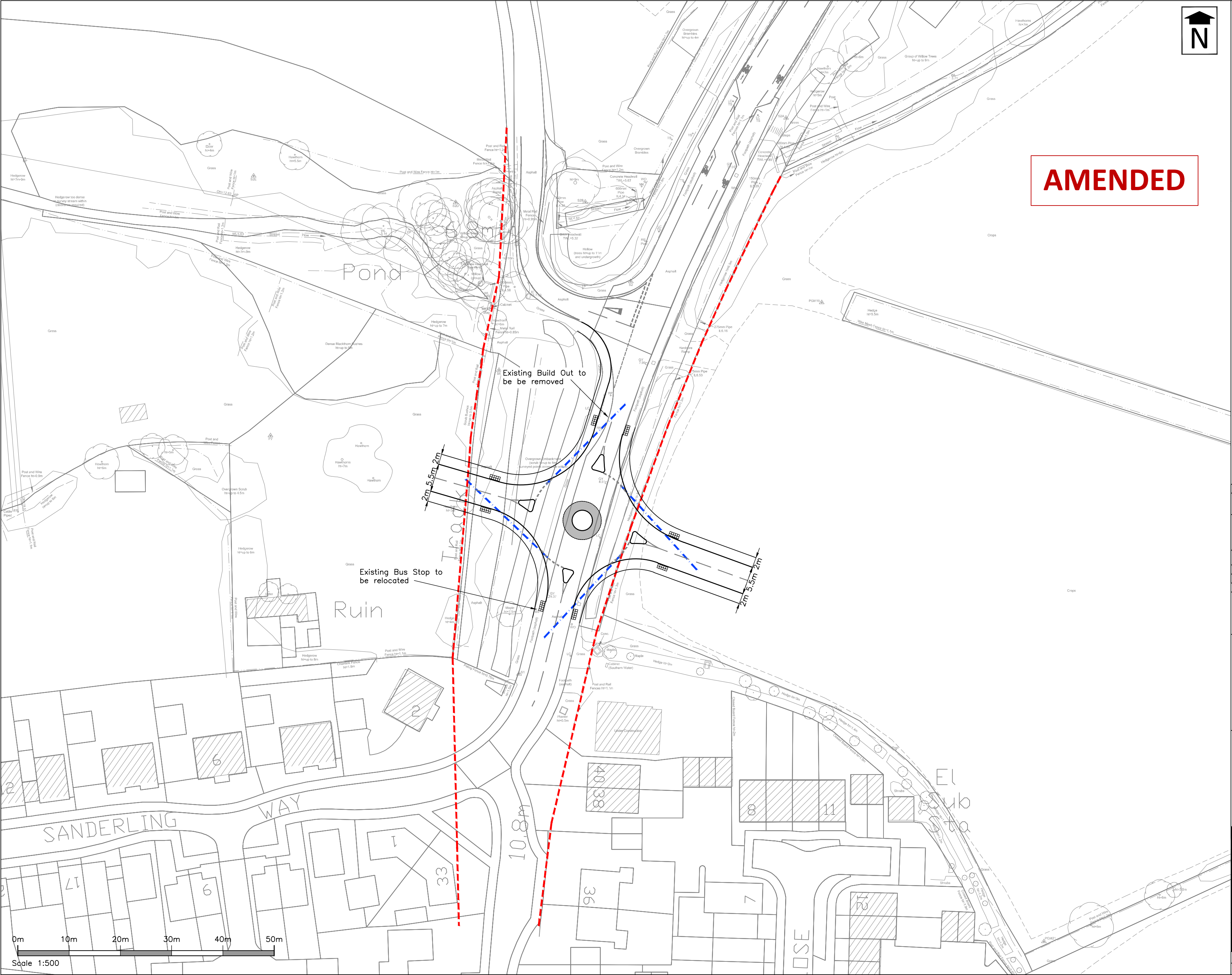
Local Plan Policy A17 - 11 states that for development at north Iwade the primary access should be provided off The Street/Sheppey Way. Vehicle access will be via a mini-roundabout access approved as part of The Land East of Iwade, Sittingbourne Development which received planning permission on 29th July 2022, 19/503974/HYBRID. The carriageway will be 5.5m wide with a 2m wide footway to each side.

Visibility splays suitable for speeds of 30mph are available at the proposed access over land under the applicant's control, land under the control of the applicant for the hybrid application or the public highway.

Access to the development has been assessed for an 11.4m long refuse vehicle. There is sufficient room to access the development and turn within the development.

The proposed development complies with national and local planning policies. It will not create an unacceptable impact on highway safety and the cumulative impacts on the road network will not be severe.

Appendix A - Mini-roundabout Access Drawing and Road Safety Audit



AMENDED



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For Planning
These drawings are produced for the purposes of supporting a planning application and should not be relied upon for tender, pricing, or construction purposes.

NOTES

1. Based on Topographical Survey, drawing no. 19004-500-01-S5 by Brunel Surveys Ltd, dated March 2018.

KEY

- Overrun Area (Colour TBC)
- Visibility in accordance with CD116, Paragraph 3.44
- Extent of Public Highway

Rev	Date	Description	Drawn	Check
E	15/06/20	'Extent of Public Highway' added to Plan and Key. Colour of visibility plays amended to from red to blue.	CJH	GE
D	12/06/20	Overrun area, pedestrian crossings and visibility to the right provided in response to Road Safety Audit Stage 1 comments. Note added regarding the relocation of the existing Bus Stop.	CJH	GE
C	08/06/20	Access amended from a staggered junction to a mini roundabout.	CJH	RML
B	29/01/20	Visibility Splay Added.	RH	GE
A	26/06/19	Title Block Updated.	RH	ADM
#	05/07/18	First Issue.	FN	GE

Status
FOR PLANNING

Client
G.H.Dean & Co. Ltd

Project
Land East of Iwade

Drawing Title
Northern Access Points

Drawing No. **D205/06** Rev E

Date: July 2018 Scale: 1:500 @ A2
E-Mail: geves@pfapl.com



safer roads for everyone

Northwest Sittingbourne and Iwade Strategic Development, Kent

Iwade Northern Site Access Mini-roundabout Option

Road Safety Audit Stage 1

on behalf of PFA Consulting

TMS reference no: 15671

Date: 12th June 2020

Northwest Sittingbourne and Iwade Strategic Development, Kent

Iwade Northern Site Access (Mini-roundabout Option)

Road Safety Audit Stage 1

1. Introduction

1.1 This report describes a Stage 1 Road Safety Audit carried out on the proposed Iwade Northern Site Access, as part of the Northwest Sittingbourne and Iwade Strategic Development, on behalf of PFA Consulting. The audit was carried out on 12th June 2020 in the offices of TMS Consultancy.

1.2 The audit team members were as follows:

Audit Team Leader

Harinder Aulak - BSc (Hons), IEng, FIHE, RegRSA (IHE)
Highways England Approved RSA Certificate of Competency
Technical Director – Engineering Services, TMS Consultancy

Audit Team Member

Richard Marriott – CertEd, MCIHT, MSoRSA
Highways England Approved RSA Certificate of Competency
Road Safety Engineer, TMS Consultancy

1.3 The audit comprised an examination of the documents listed in **Appendix A**. The Road Safety Audit was undertaken in accordance with the Brief provided by Graham Eves of PFA Consulting.

1.4 The site was visited by the Audit Team on Monday 10th February 2020 between 13:30 and 15:30hrs, as part of an audit on a different option for the junction. The weather was rain showers. Traffic flows were low to moderate. Pedestrian and cycle flows were low.

1.5 The terms of reference of the Road Safety Audit are as described in GG 119 (GG 119 superseded HD 19/15 in November 2018). The team has examined and reported only on the road safety implications of the scheme as presented and has not examined or verified the compliance of the design to any other criteria.

- 1.6 All of the problems described in this report are considered by the audit team to require action in order to improve the safety of the scheme and minimise collision occurrence.
- 1.7 A scheme drawing is included in **Appendix B**, where the locations of specific problems are referenced. A location plan of the scheme is also included in this Appendix.
- 1.8 The scheme consists of providing a four-arm mini-roundabout along The Street/Sheppey Way, between the Sanderlings Way and Old Ferry Road junctions. Footways will be provided as part of the junction proposals.

Note: A Stage 1 Road Safety Audit was carried out on a different junction design by TMS Consultancy in February 2020 (TMS Report No. 15512). This design consisted of staggered priority junctions instead of the mini-roundabout.

1.9 Road Safety Audit Response Report

Following the completion of the road safety audit, the design team should prepare a road safety audit response report in collaboration with the Overseeing Organisation.

The response report should incorporate the following:

- **Decision Log** spreadsheet, where each Problem and Recommendation in the Safety Audit report is reiterated
- In the Decision Log, a response should be provided by the Design Team and Overseeing Organisation for each problem raised in the RSA report, together with an agreed action

Further information is provided in **GG 119 Sections 4.11 to 4.19** and **Appendix F** (where a road safety audit response report template is available).

The response report should be produced and finalised within *one month* of the issue of the RSA report. A copy of the response report should be issued to the Safety Audit Team for information.

2. Items resulting from this Stage 1 Audit

2.1 PROBLEM

General: Deflection through mini-roundabout

Summary: Risk of entry versus circulatory type collisions.

The mini-roundabout will have a small central island and wide circulatory carriageway and so deflection on all approaches will be low. This could result in road users not slowing down as they travel through the junction and entry versus circulatory type collisions could occur as a result. Pedal cyclists on the circulatory carriageway would be particularly vulnerable under such circumstances.

RECOMMENDATION

Deflection should be improved at the mini-roundabout by providing a larger central island (which should be domed) and introducing an overrun area around the island if needed. The raising of the junction on to a speed table would also help to control vehicle speeds through the junction.

2.2 PROBLEM

Location: Side-road entries to mini-roundabout

Summary: Risk of pull-out type collisions.

The right-hand visibility splays from the side roads at the mini-roundabout will lie across large sections of land and so could be obscured by hedge lines and boundary walls. This could result in road users pulling out onto the mini-roundabout into the path of vehicles approaching from their right and collisions could occur as a consequence.

RECOMMENDATION

It should be ensured that the appropriate visibility splays can be achieved from the side roads at the junction. This may require some adjustment to the highway boundary to ensure the visibility splays are provided within public land.

2.3 PROBLEM

General: Splitter islands at mini-roundabout

Summary: Risk of injury for pedestrians.

The splitter islands are likely to be used by pedestrians as they cross at desire lines, but the islands are small and so may not provide adequate protection for pedestrians as they wait in the middle of the road. This could result in them being struck by passing vehicles.

RECOMMENDATION

The islands should be enlarged so that uncontrolled pedestrian crossing points can be provided across all four arms of the mini-roundabout. The islands should be large enough to accommodate pushchairs and wheelchair users.

2.4 PROBLEM

Location: Bus-stop on western side of The Street / Sheppey Way

Summary: Risk of collisions due to close proximity of bus-stop to mini-roundabout.

There is an existing bus-stop on the western side of the road, which will be positioned close to the proposed mini-roundabout. Buses stationary near the junction are likely to obstruct sight lines and interfere with vehicle movements, which could increase the risk of collisions, such as pull-outs and side swipes.

RECOMMENDATION

The bus-stop should be relocated to a more suitable position.

3. Audit Team Statement

We certify that the terms of reference of the road safety audit are as described in GG 119 (formerly HD 19/15).

Audit Team Leader

Harminder Aulak - BSc (Hons), IEng, FIHE, RegRSA (IHE)
Highways England Approved RSA Certificate of Competency
Technical Director – Engineering Services, TMS Consultancy

Signed



Date 12th June 2020

Audit Team Member

Richard Marriott – CertEd, MCIHT, MSoRSA
Highways England Approved RSA Certificate of Competency
Road Safety Engineer, TMS Consultancy

Signed



Date 12th June 2020

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Appendix A

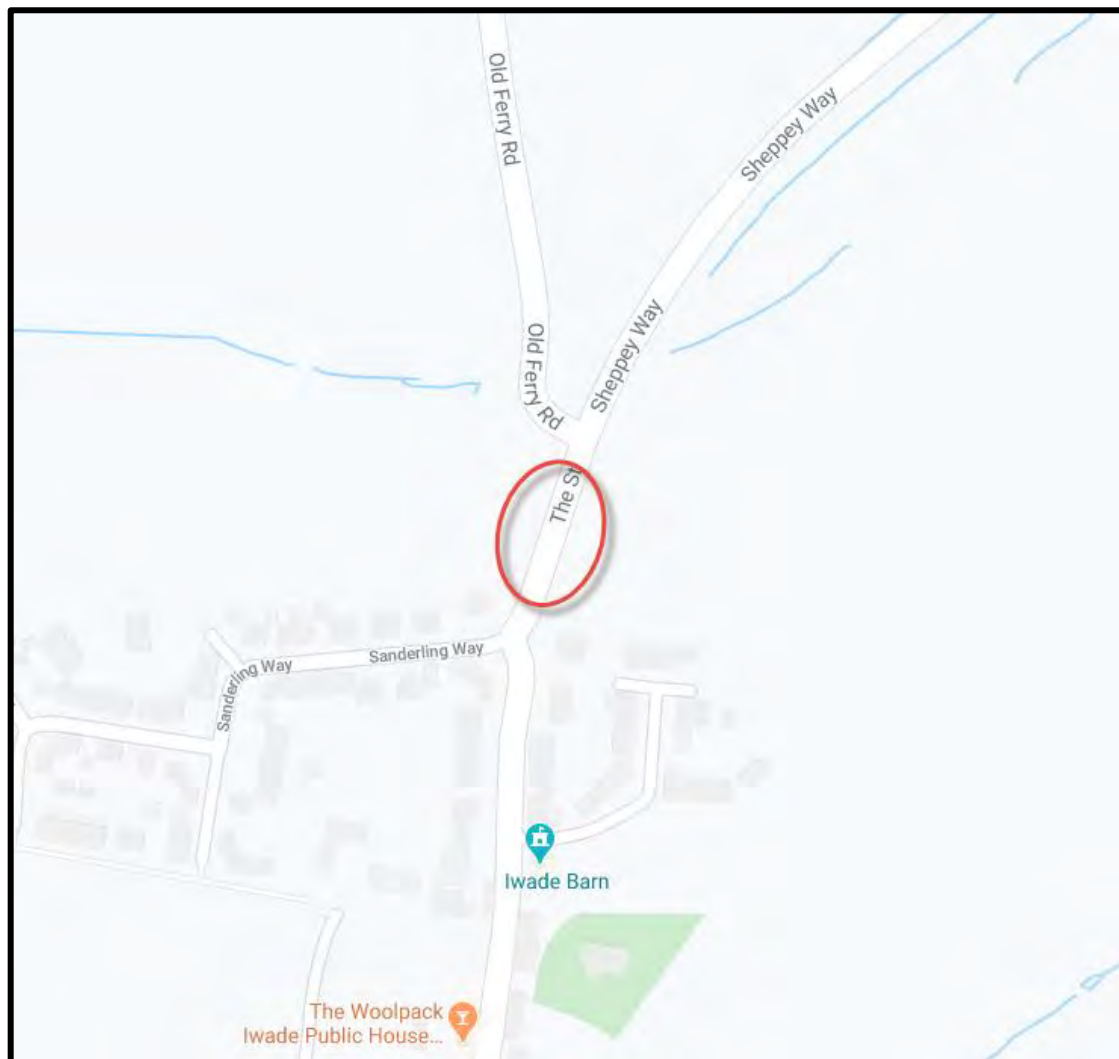
Documents Examined:

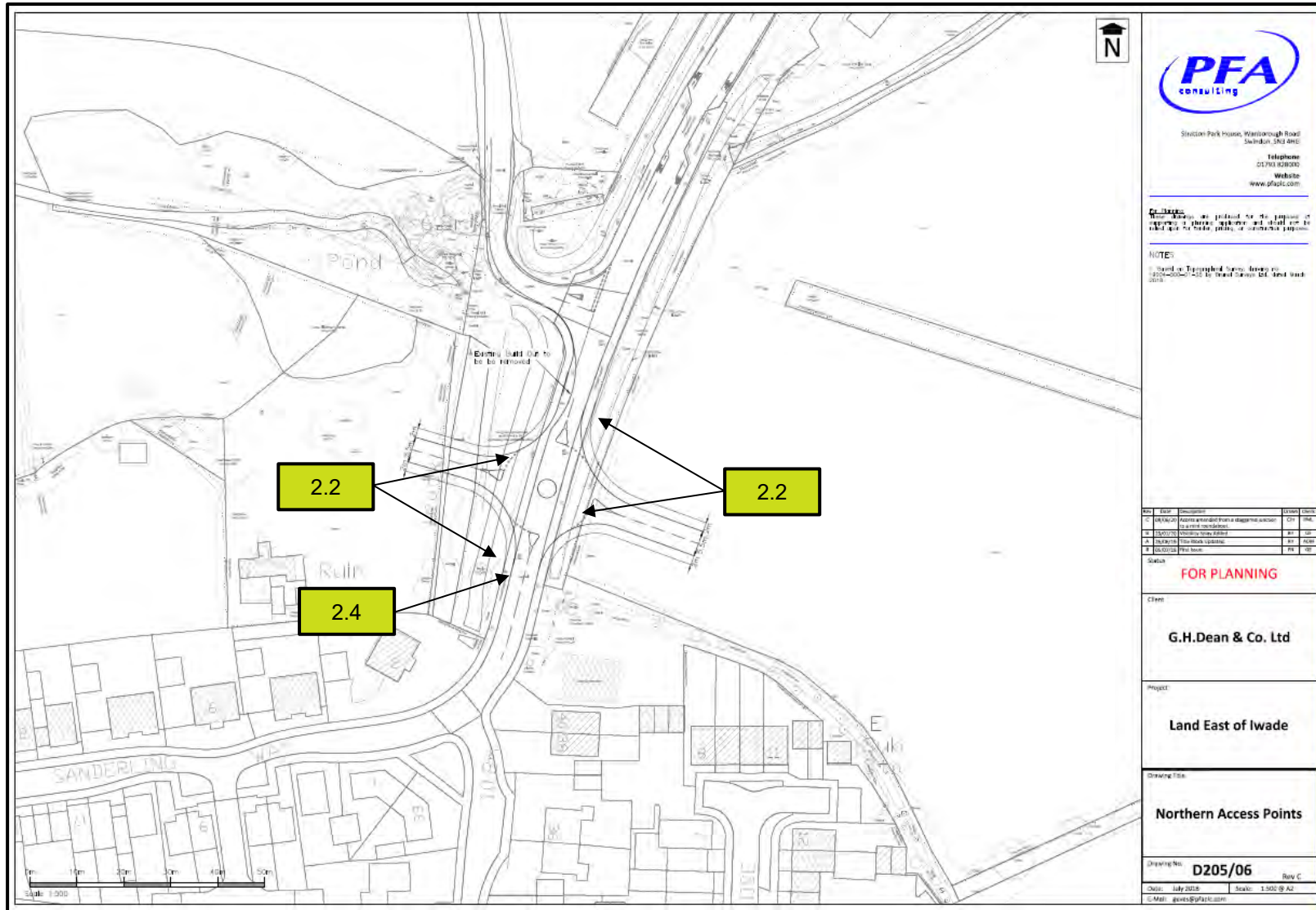
-  D205- Iwade Northern Site Access Stage 1 RSA Brief June. 2020
-  D205-06C Northern Access Points
-  NW Sittingbourne and Iwade - Iwade Northern Site Access - RSA1 Report

Appendix B

Please refer to the following page for a plan illustrating the locations of the problems identified as part of this audit (location numbers refer to paragraph numbers in the report).

The location of the scheme is shown below:



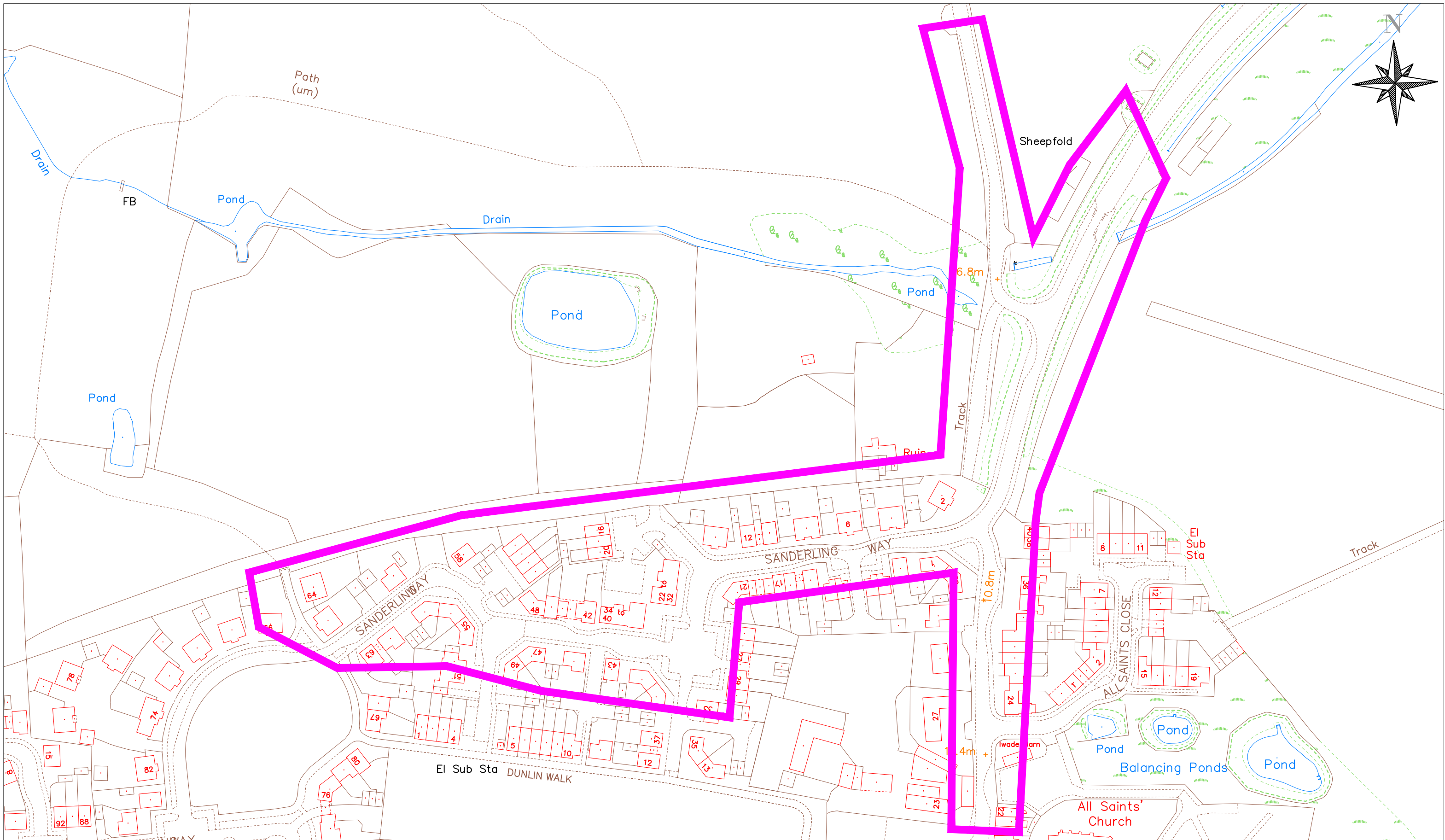


Designer's Response to Road Safety Audit Stage 1**Scheme Title: Land East of Iwade –Northern Site Access****RSA1 reference : TMS 15671 (15th June 2020)****15-06-2020**

Item No.	Safety Audit Problems/Recommendations	Designer's Response
2.1	General: Deflection through mini-roundabout Summary: Risk of entry versus circulatory type collisions. The mini-roundabout will have a small central island and wide circulatory carriageway and so deflection on all approaches will be low. This could result in road users not slowing down as they travel through the junction and entry versus circulatory type collisions could occur as a result. Pedal cyclists on the circulatory carriageway would be particularly vulnerable under such circumstances. RECOMMENDATION Deflection should be improved at the mini-roundabout by providing a larger central island (which should be domed) and introducing an overrun area around the island if needed. The raising of the junction on to a speed table would also help to control vehicle speeds through the junction.	Recommendation Accepted. A domed central island is to be provided with an overrun area. The provision a speed table will be discussed with the HA at detailed design stage.
2.2	Location: Side-road entries to mini-roundabout Summary: Risk of pull-out type collisions. The right-hand visibility splays from the side roads at the mini-roundabout will lie across large sections of land and so could be obscured by hedge lines and boundary walls. This could result in road users pulling out onto the mini-roundabout into the path of vehicles approaching from their right and collisions could occur as a consequence.	Recommendation Accepted. The extent of highway land is significant and adequate visibility can be provided.

	RECOMMENDATION It should be ensured that the appropriate visibility splays can be achieved from the side roads at the junction. This may require some adjustment to the highway boundary to ensure the visibility splays are provided within public land.	
2.3	General: Splitter islands at mini-roundabout Summary: Risk of injury for pedestrians. The splitter islands are likely to be used by pedestrians as they cross at desire lines, but the islands are small and so may not provide adequate protection for pedestrians as they wait in the middle of the road. This could result in them being struck by passing vehicles. RECOMMENDATION The islands should be enlarged so that uncontrolled pedestrian crossing points can be provided across all four arms of the mini-roundabout. The islands should be large enough to accommodate pushchairs and wheelchair users.	Comment acknowledged. Specific pedestrian crossing points are now identified away from the splitter “Islands” (which are not physical islands).
2.4	Location: Bus-stop on western side of The Street / Sheppey Way Summary: Risk of collisions due to close proximity of bus-stop to mini-roundabout. There is an existing bus-stop on the western side of the road, which will be positioned close to the proposed mini-roundabout. Buses stationary near the junction are likely to obstruct sight lines and interfere with vehicle movements, which could increase the risk of collisions, such as pull-outs and side swipes. RECOMMENDATION The bus-stop should be relocated to a more suitable position.	Recommendation Accepted. During detailed design a new location for the bus stop will be agreed with the highway authority.

Appendix B - Crash Data



Location: Sanderling Way, Iwade

3 years personal injury crash data up to 31/07/2023 - ZERO CRASHES

KCC Ref number: EXT/270/23

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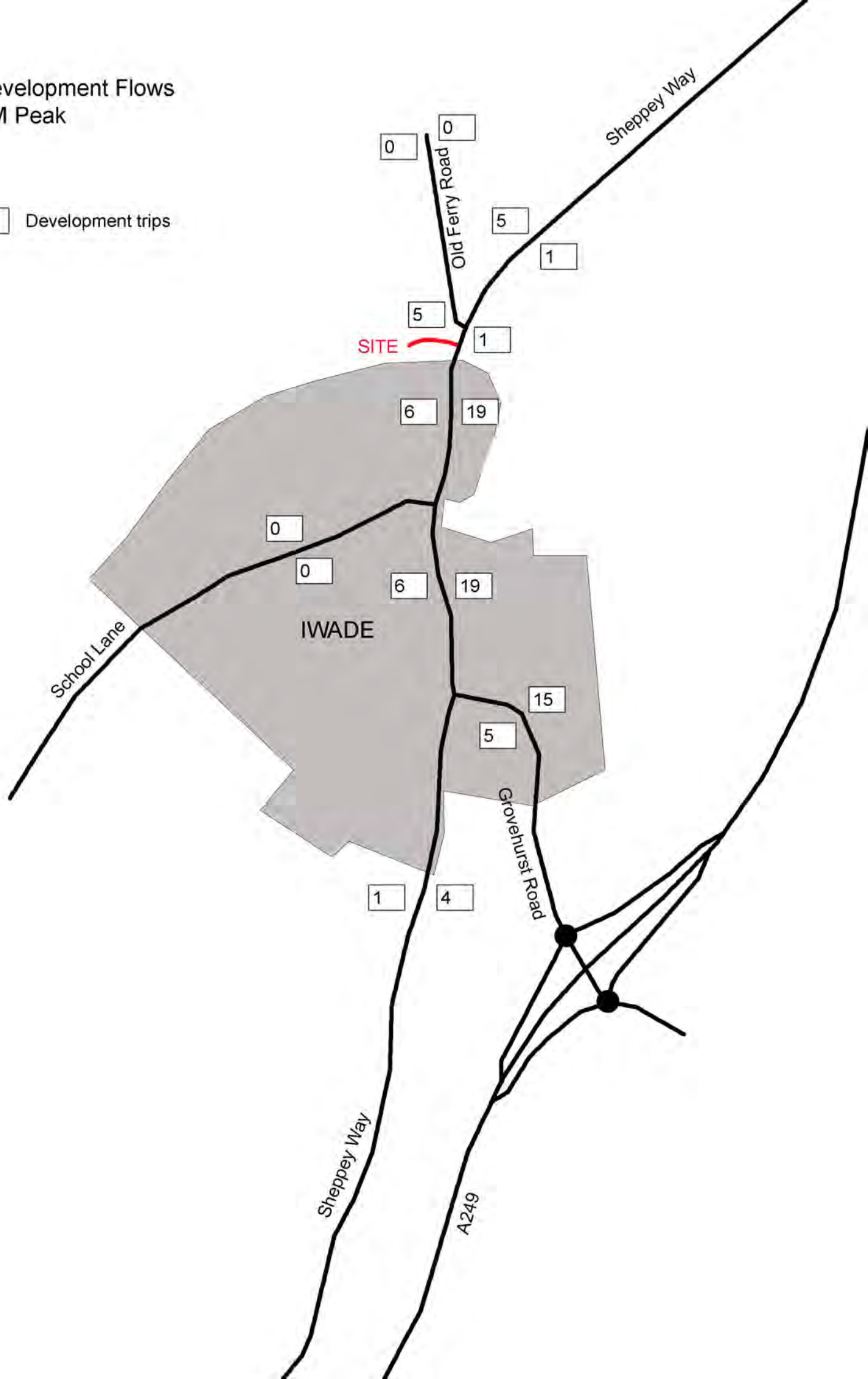
Crash Severity	
	Slight
	Serious
	Fatal

**Kent
County
Council**
kent.gov.uk

Appendix C - Development Trips Distribution

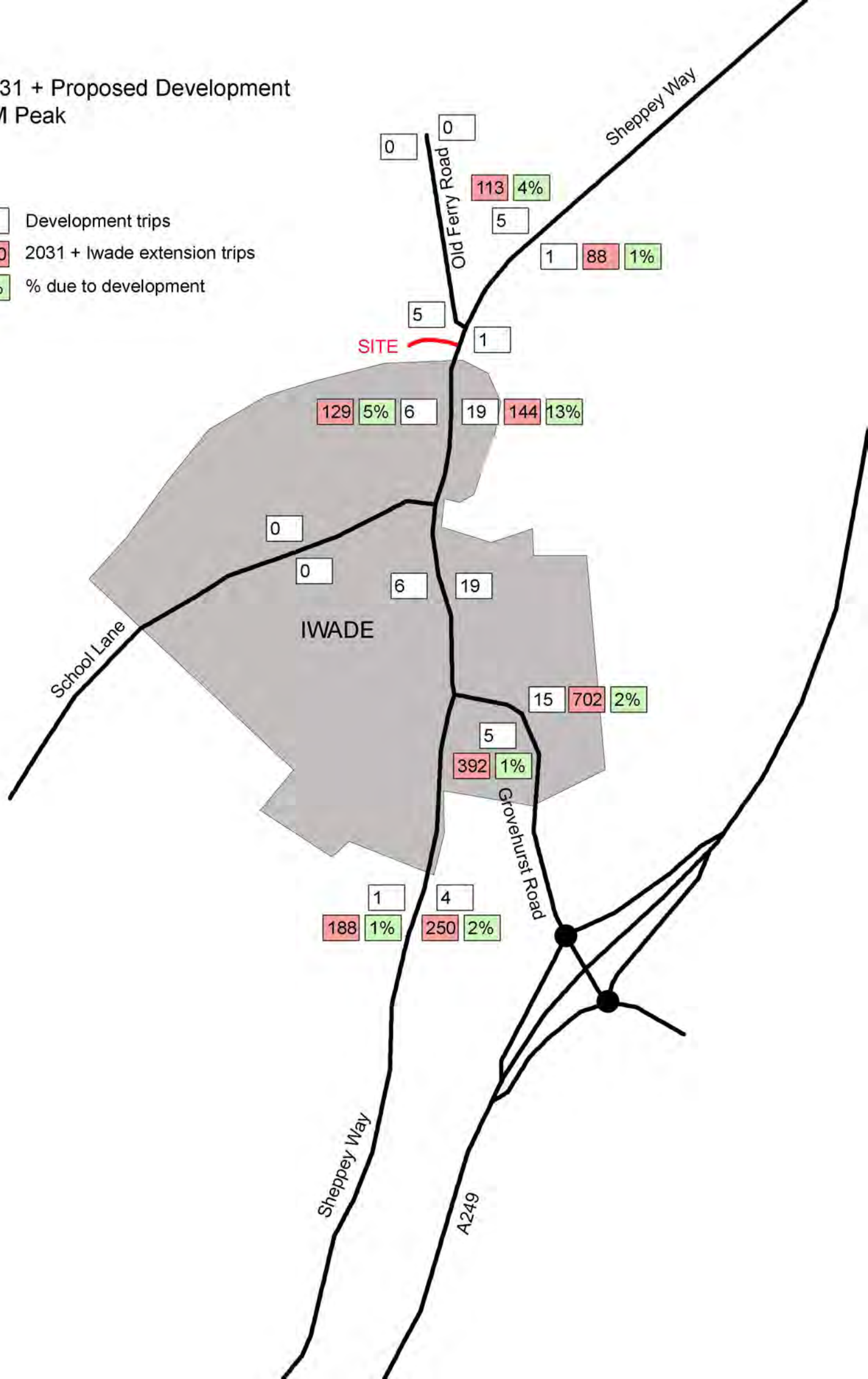
Development Flows AM Peak

1 Development trips



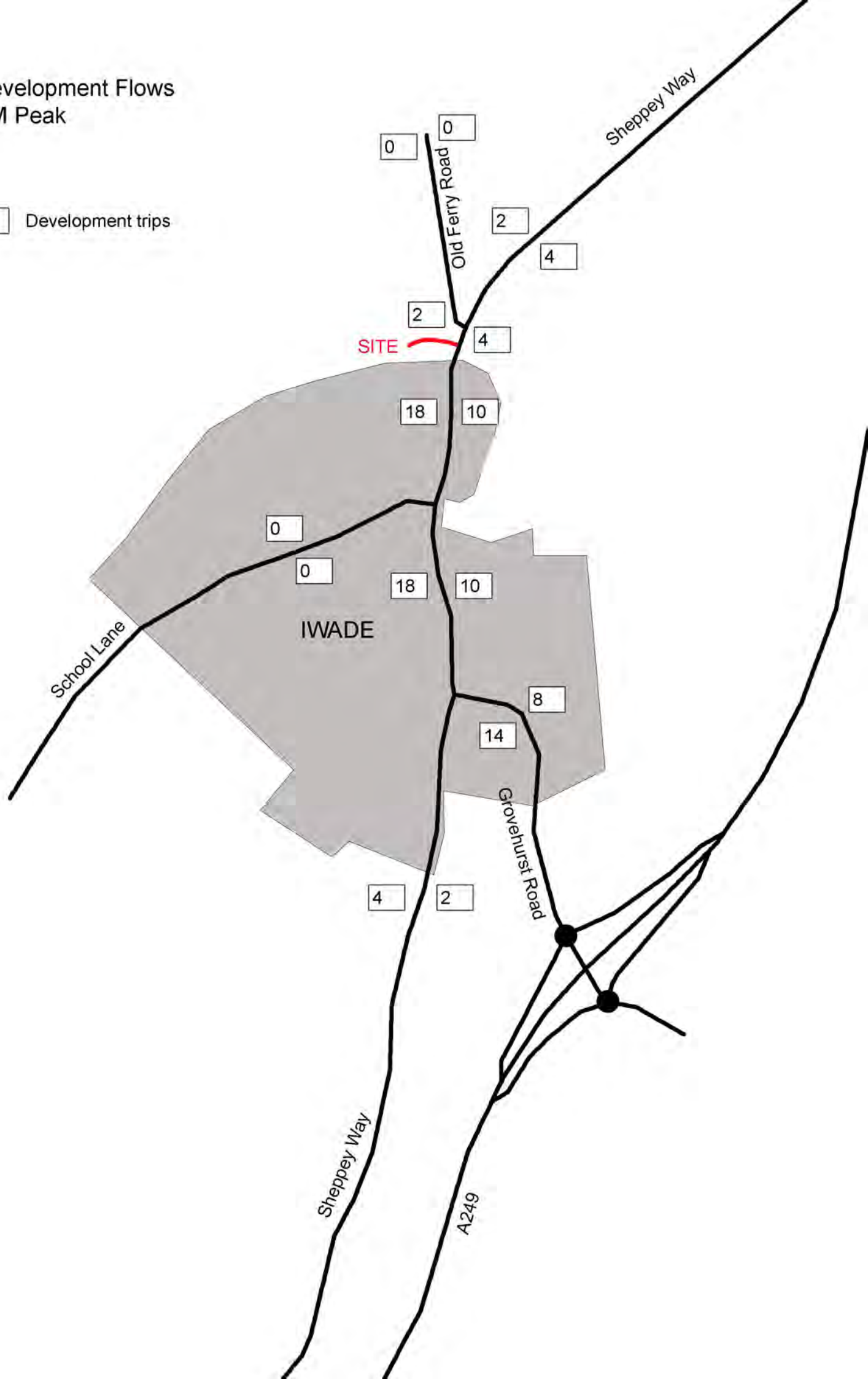
2031 + Proposed Development AM Peak

- 1 Development trips
- 100 2031 + Iwade extension trips
- 1% % due to development



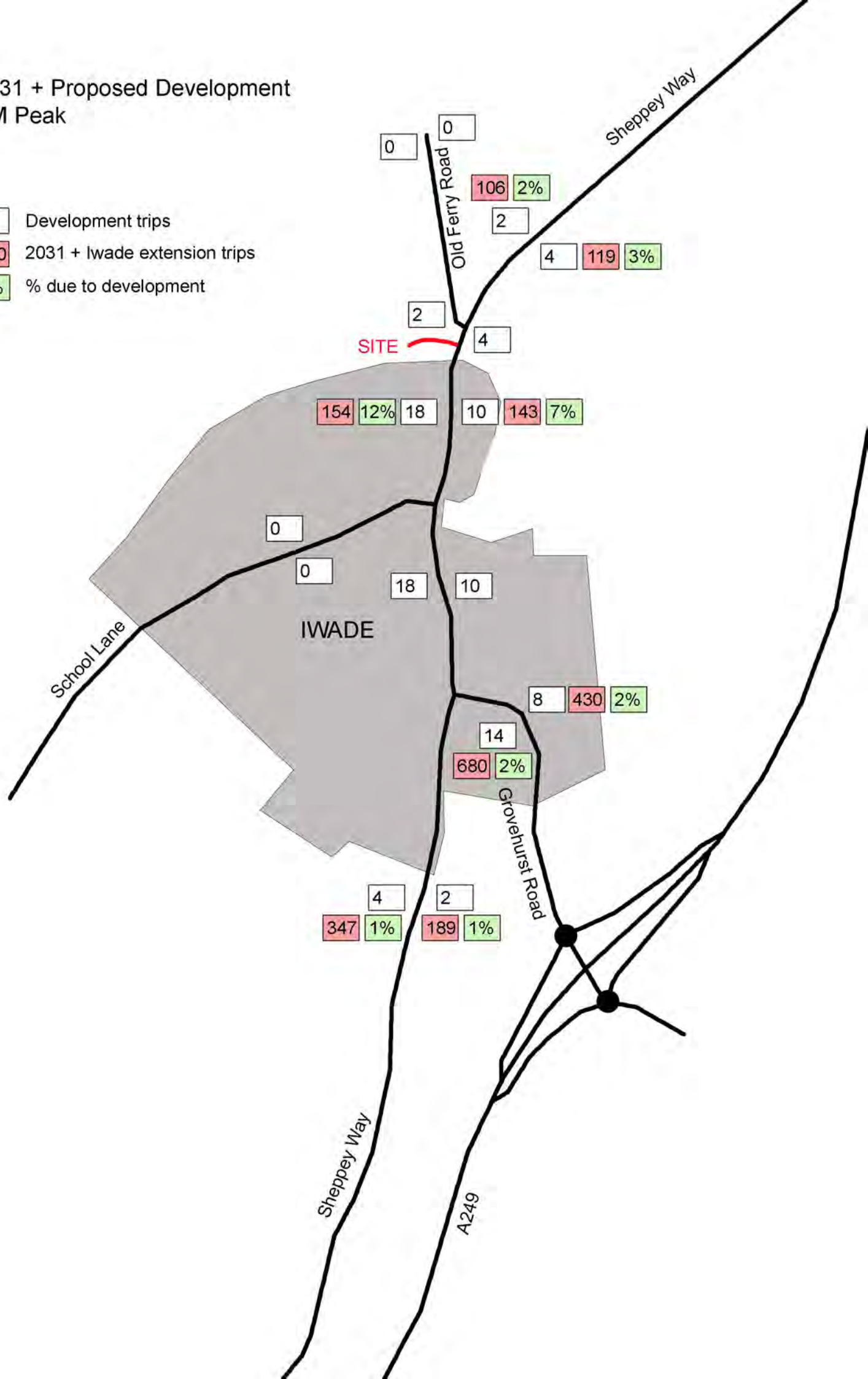
Development Flows PM Peak

1 Development trips



2031 + Proposed Development PM Peak

- 1 Development trips
- 100 2031 + Iwade extension trips
- 1% % due to development



Appendix D - Car Parking Layout and Schedule

Notes:

Please report all discrepancies, errors and omissions.

Verify all dimensions on site before commencing any work on site or preparing shop drawings.

All materials, components and workmanship are to comply with the relevant British Standards, Codes of Practice, and appropriate manufacturers' recommendations that from time to time shall apply.

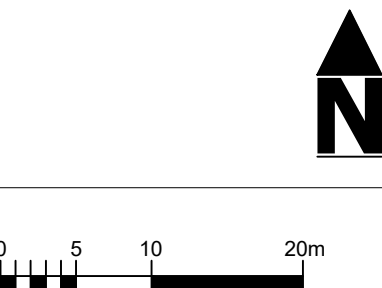
For all specialist work, see relevant drawings.

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Rev A. Revised Layout. 05/12/23.



Land at Sanderling Way, Iwade, Sittingbourne, ME9 8TE

Parking Schedule

Plot	Bedrooms	Required	Space	Car barn	Total	Visitor
1	4	3+	2	1	3	
2	3	2-3	2	1	3	
3	3	2-3	2		2	
4	4	3+	2	1	3	
5	2	1-2	2		2	
6	2	1-2	2		2	
7	2	1-2	1		1	
8	3	2-3	2	1	3	
9	3	2-3	2	1	3	
10	4	3+	2	1	3	
11	4	3+	2	2	4	
12	3	2-3	2		2	
13	3	2-3	2		2	1
14	3	2-3	2		2	1
15	4	3+	2	2	4	
16	3	2-3	2		2	
17	3	2-3	2		2	
18	3	2-3	2		2	
19	3	2-3	2		2	
20	3	2-3	2	1	3	
21	3	2-3	2	1	3	
22	3	2-3	2	1	3	1
23	3	2-3	2	1	3	1
24	3	2-3	2		2	
25	3	2-3	2		2	
26	3	2-3	2		2	
27	2	1-2	1		1	
28	2	1-2	2		2	
29	2	1-2	2		2	
30	4	3+	2	1	3	
31	3	2-3	2	1	3	
32	3	2-3	2	1	3	
33	3	2-3	2	1	3	2
34	3	2-3	2	1	3	2
35	3	2-3	2	1	3	
36	4	3+	2	1	3	
37	3	2-3	2		2	
38	3	2-3	2		2	
39	1	1	1		1	
40	1	1	1		1	
41	2	1	1		1	
42	2	1	1		1	
43	2	1	1		1	
44	2	1	1		1	
45	4	3+	2	1	3	
46	3	2-3	2	1	3	2
47	3	2-3	2	1	3	
48	3	2-3	2	1	3	
49	3	2-3	2		2	
50	3	2-3	2		2	
51	3	2-3	2	1	3	
52	3	2-3	2	1	3	
53	3	2-3	1	1	2	
54	3	2-3	1	1	2	
55	3	2-3	1	1	2	
56	3	2-3	2	1	3	2
57	3	2-3	2	1	3	
58	4	3+	2	1	3	
59	3	2-3	1	1	2	
60	3	2-3	1	1	2	
TOTAL			107	35	142	12

	1/2 bed apartment
	2 bed house
	3 bed house
	3 bed house
	4 bed house
	4 bed house

Appendix E - Visibility Splays at the Access

Notes:

Please report all discrepancies, errors and omissions.

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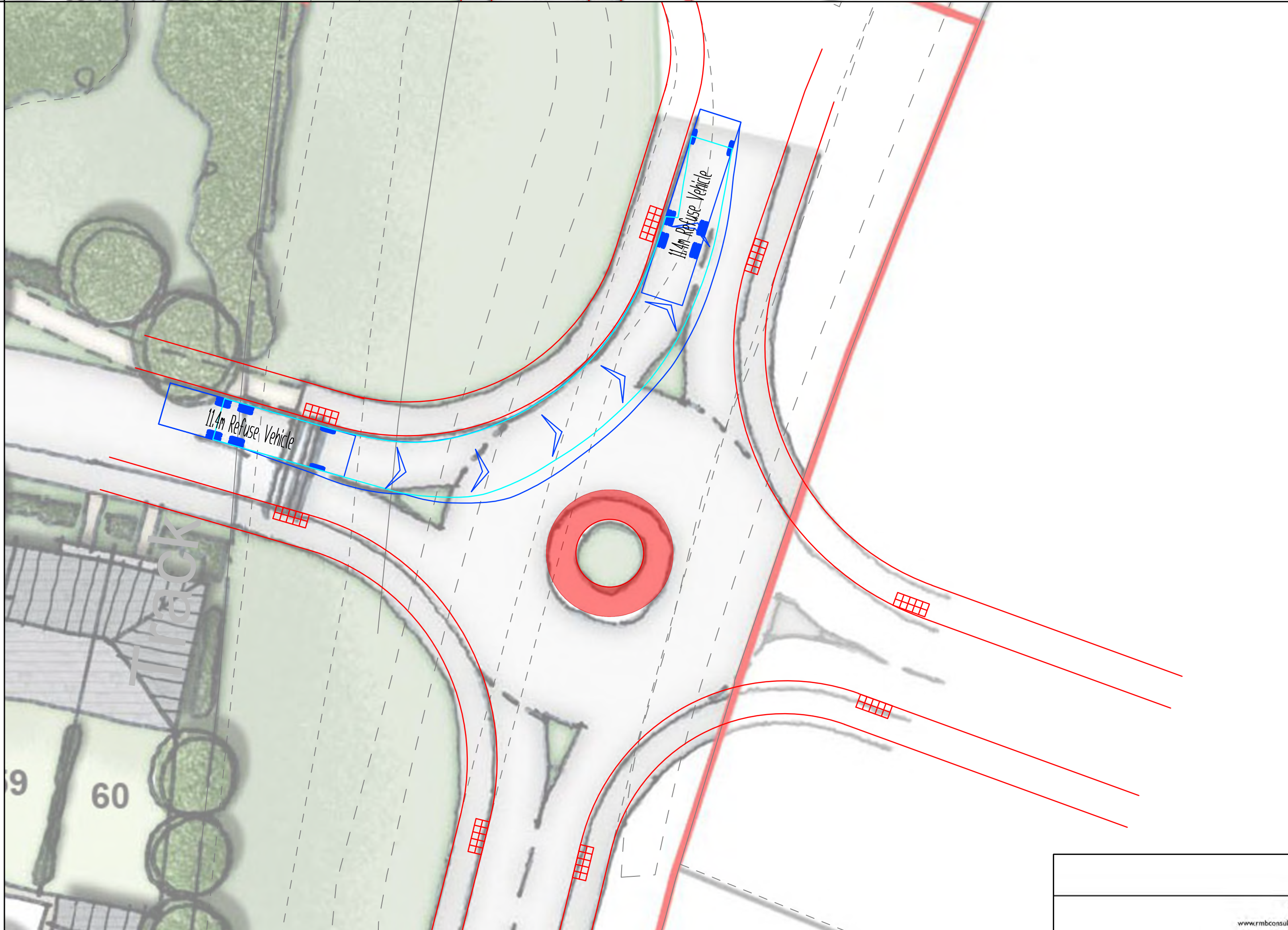
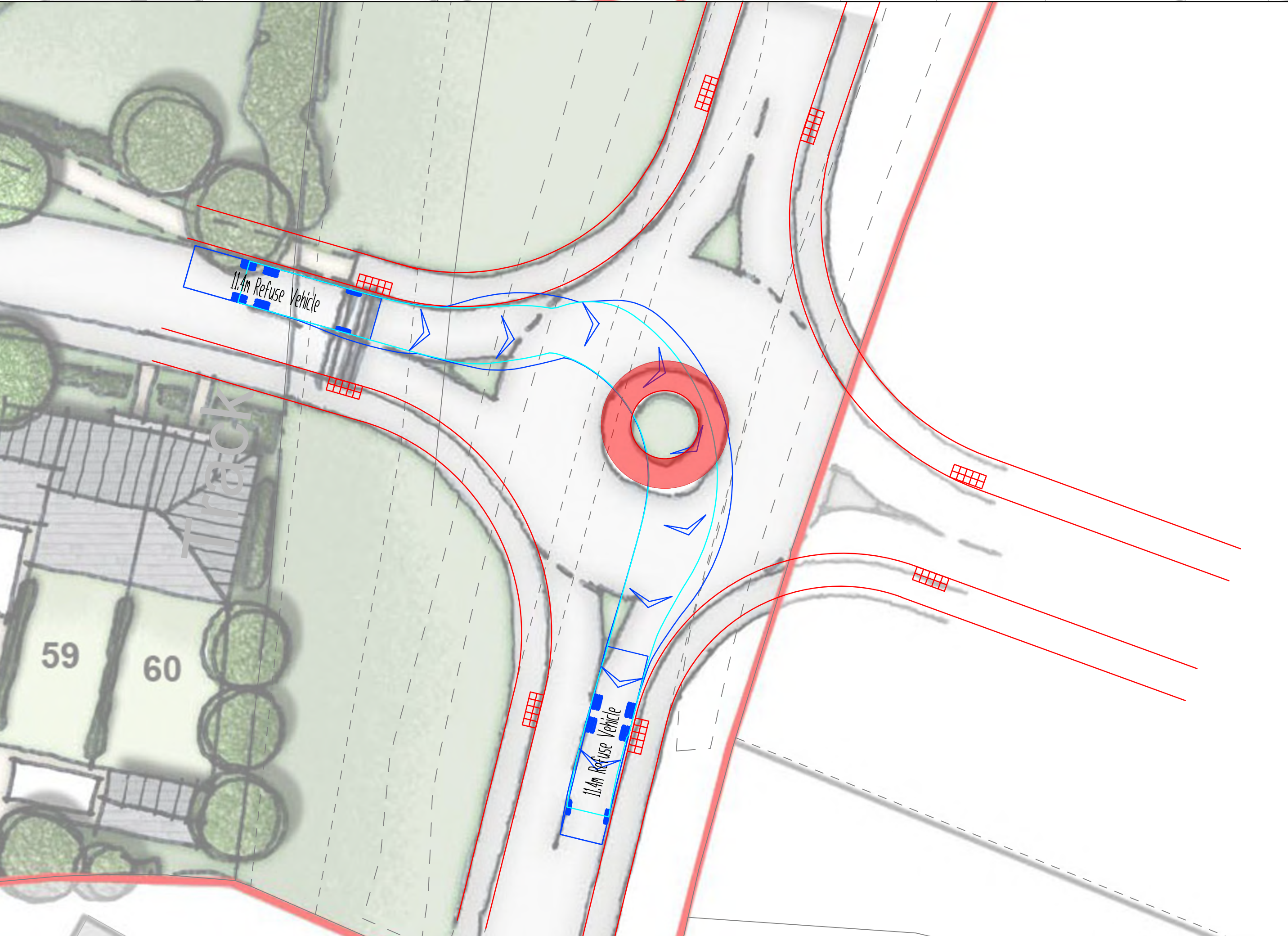
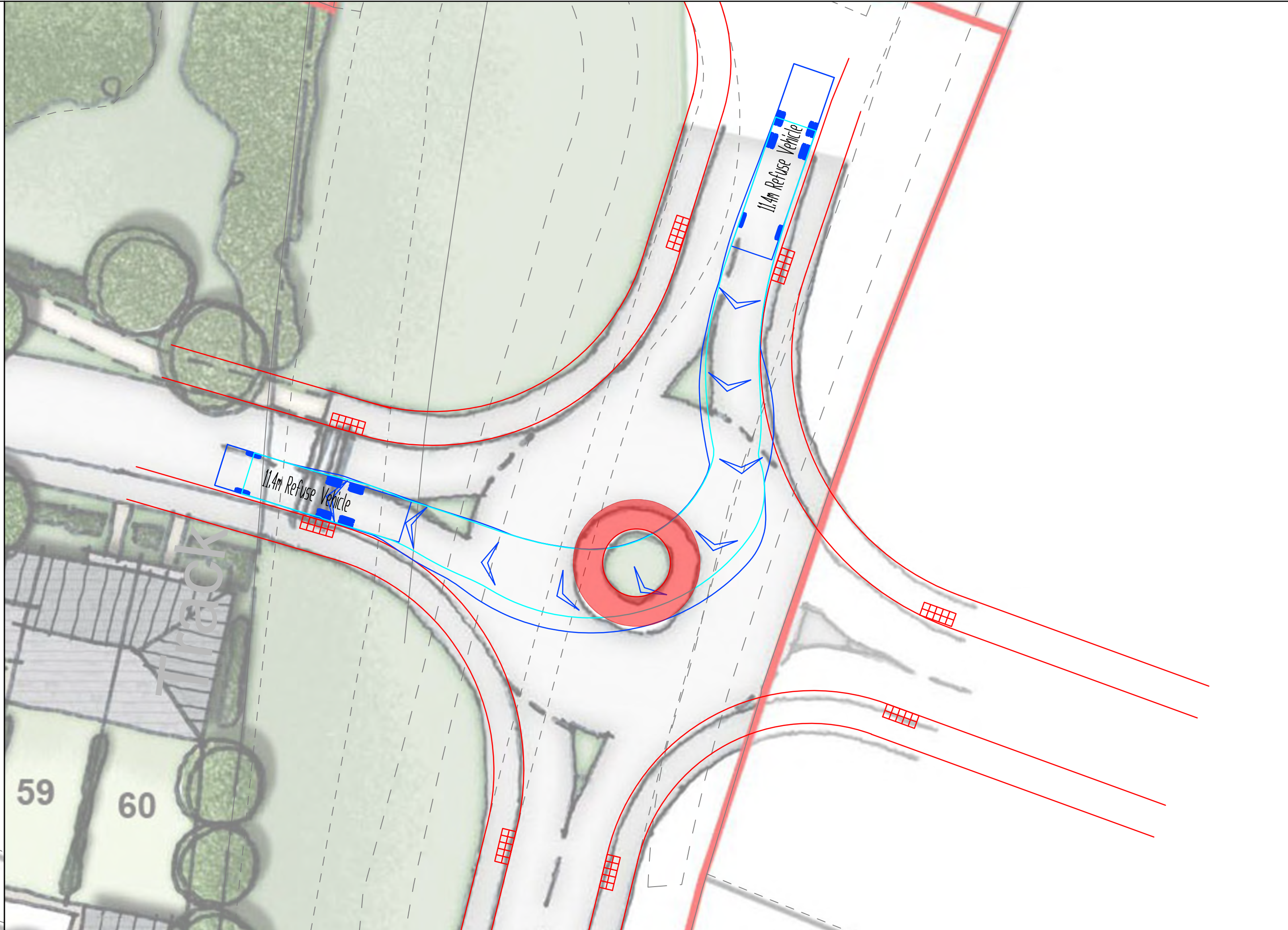
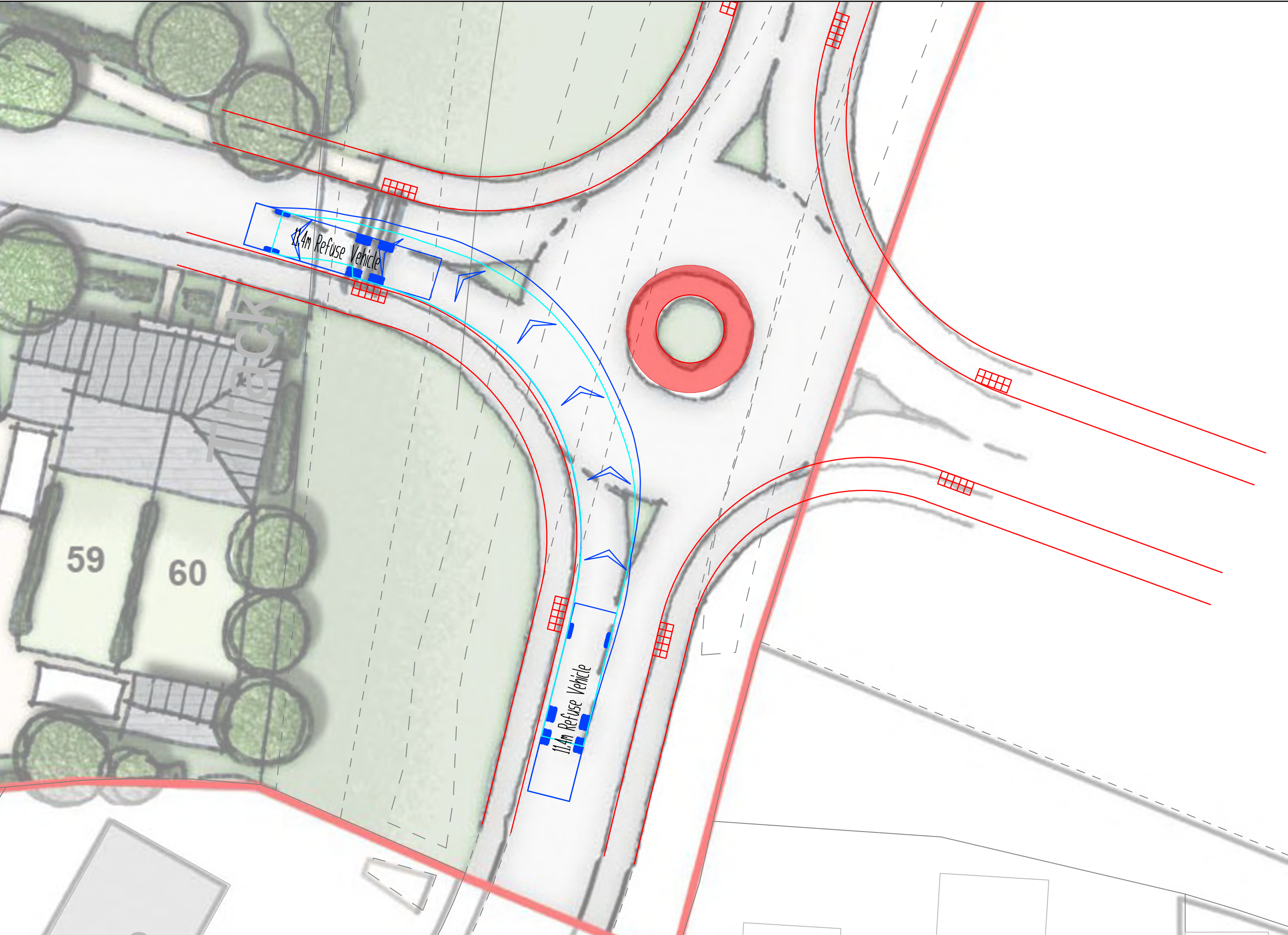
Rev A. Revised Layout. 05/12/23.



39 Cassington Road Canterbury Kent CT1 3HJ Tel/Fax: 01227 472128 • Mobile: 07886 185705 www.rmbconsultants.co.uk • robert.beech@rmbconsultants.co.uk		RMB	
client Sanderling Way	project Sanderling Way Iwade ME9 8TE	drawing no. 1:200 @ A1	visibility Splays at the Access
date November 2023		drawing no. 789/211A	drawn by RB

Visibility Splays at the Access
Sanderling Way, Iwade, ME9 8TE

Appendix F - Swept Path Analysis



Notes:

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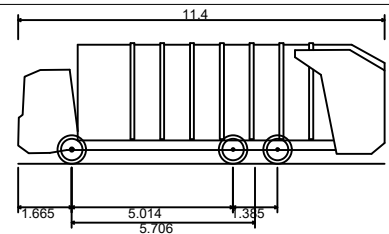
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Rev Revised Layout. 05/12/23.



11.4m Refuse Vehicle
Overall Length 11.400m
Overall Width 2.530m
Overall Body Height 3.750m
Min Body Ground Clearance 0.300m
Track Width 2.530m
Lock to lock time 4.00s
Kerb to Kerb Turning Radius 11.550m





Notes:

Please report all discrepancies, errors and omissions.

Verify all dimensions on site before commencing any work on site or preparing shop drawings.

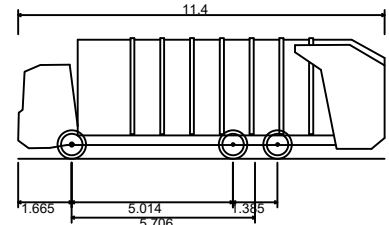
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Rev A. Revised Layout. 05/12/23.



11.4m Refuse Vehicle
Overall Length 11.400m
Overall Width 2.530m
Overall Body Height 3.750m
Min Body Ground Clearance 0.300m
Track Width 2.530m
Lock to lock time 4.00s
Kerb to Kerb Turning Radius 11.550m

