Gleeson Homes

PROPOSED RESIDENTIAL DEVELOPMENT, LAND AT HOW BANK FARM, EGREMONT AND FORMER ORGILL SCHOOL, EGREMONT

Transport Assessment

VN201725

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1 INTRODUCTION

1.1.1 Vectos has been commissioned by Gleeson Homes to provide traffic and transportation advice to support a planning application for residential development on land at How Bank Farm and the former Orgill School in Egremont, Cumbria.

1.1.2 This Transport Assessment provides information on the traffic and transport planning aspects of the development proposals and forms supplementary information to assist in the determination of the planning application.

1.2 Site Locations

1.2.1 The planning application relates to the redevelopment of two sites in Egremont. Both sites lie to the west of Egremont town centre, with the How Bank Farm site lying approximately 150 metres to the south west of the former Orgill School site.

1.2.2 The strategic location of the two sites is shown in **Plan 1**, with **Plan 2** showing the sites in a more local context. An aerial view of the site location is shown in **Figure 1.1**.

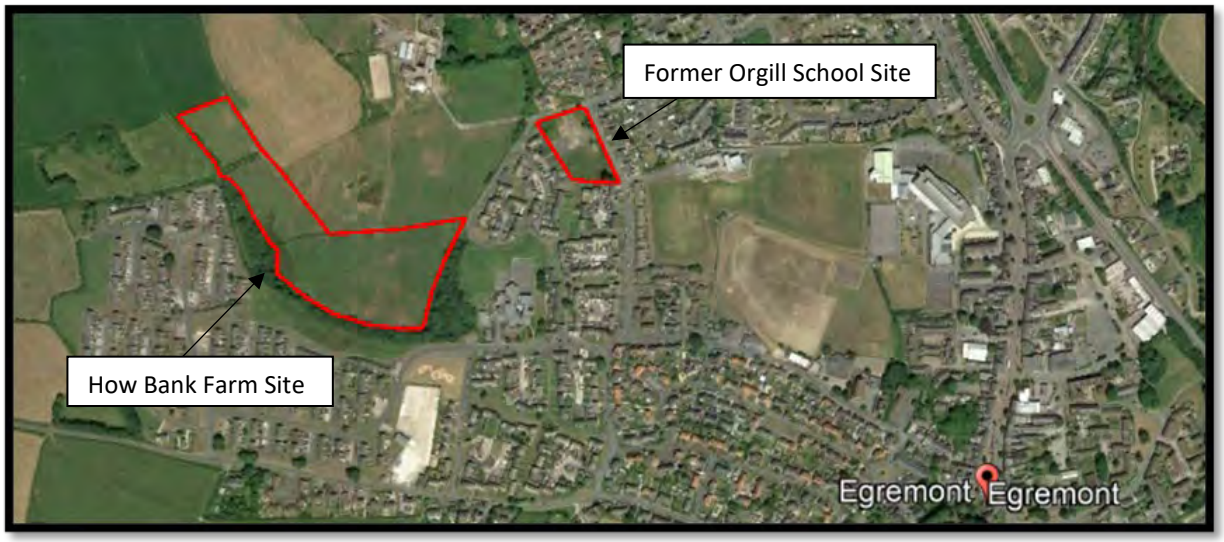


Figure 1.1: Aerial View of Site Location

1.3 Proposed Development

1.3.1 The detailed planning application will cover both sites with the How Bank Farm site providing 97 dwellings and the former Orgill School providing a further 17 dwellings. As such, the planning application will propose a total of 114 units.

1.3.2 Access to the How Bank Farm site is proposed from Baybarrow Road with access to the Orgill School site proposed from Chaucer Avenue and Croadalla Avenue.

1.3.3 The proposed site layout for both sites is shown in **Plan 3**. This plan also shows the application red line boundary.

1.4 Scope of Report

1.4.1 This Transport Assessment has been prepared in accordance with guidance provided by the Department for Transport's (DfT) *'Travel Plans, Transport Assessment and Statements'* (2014) document, as well as paying due notice to the DfT's now superseded 'Guidance on Transport Assessments' document. The scope of the report has also been discussed with highway officers from Cumbria County Council and pays due regard to the County Council's Development Design Guide.

1.4.2 Following this introduction, the report provides the following information:

- **Section 2** – A review of pertinent national planning policy guidance;
- **Section 3** – A review of baseline conditions;
- **Section 4** – A review of the accessibility of the site by sustainable modes;
- **Section 5** – A description of the development proposals;
- **Section 6** – Provides a summary of the traffic generation forecasts and trip distribution for both site;
- **Section 7** – Provides a review of the impact of the development proposals on the local highway network; and
- **Section 8** – Report summary and conclusions.

2 TRANSPORT PLANNING CONSIDERATIONS

2.1 Introduction

2.1.1 **Section 2** of this report considers the national planning policy guidance which is pertinent in the context of the development proposals.

2.2 National Planning Policy

2.2.1 The main source of national policy regarding the transport planning aspects development can be found in the Department of Communities and Local Government 'National Planning Policy Framework' which was published in February 2019. This replaces the previous versions published in March 2012 and July 2018.

2.2.2 At the heart of the Framework is a presumption in favour of sustainable development. In accordance with national policy, it is considered that the development constitutes a sustainable form of development within walking and cycling distance of local residential development and public transport links.

2.2.3 As part of promoting sustainable transport, paragraph 108 of the revised NPPF states that in assessing 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.*

2.2.4 Paragraph 109 goes on to state that '*Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe*'.

3 BASELINE CONDITIONS

3.1 Introduction

3.1.1 **Section 3** of this report provides a review of the baseline conditions in the vicinity of the sites, including a description of the location of the site and existing highway network, a review of personal injury accident data.

3.2 Existing Site Location

3.2.1 The proposed development sites are located approximately 800 metres to the west and northwest of Egremont town centre.

3.2.2 The areas surrounding the sites are predominantly residential in nature, with areas of open space located to the north and west of both sites.

3.2.3 Of the two sites the How Bank Farm site is currently undeveloped open space, with no vehicle access currently available to the land within the application red line. The northern of the two sites previously accommodated Orgill School, with vehicle access provided from Chaucer Avenue. The Orgill School site has also been cleared of all built development, although a dropped kerb provision remains on Chaucer Avenue.

3.3 Surrounding Highway Network

3.3.1 The sites are located within an intricately connected road network, which provide a multitude of route choices for local residents.

3.3.2 The main site access for the How Bank Farm site will be taken from Baybarrow Road with access for the former Orgill School site taken from Chaucer Avenue and Croadalla Avenue.

3.3.3 The highway network in the vicinity of the sites is illustrated in **Figure 3.1** below and described in the following paragraphs.

Figure 3.1: Surrounding Highway Network

3.3.4 Chaucer Avenue forms the northern boundary of the Orgill School site. Chaucer Avenue is a 5.5-metre-wide single carriageway road subject to a 30-mph speed restriction and provides a footway along the southern boundary of the carriageway. Chaucer Avenue provides connections to a small residential development to the west of the Orgill School site and does not serve as a through route for traffic.

3.3.5 In the northeast corner of the site Chaucer Road forms the minor arm of a priority-controlled junction with Croadalla Avenue/Smithfield Road.

3.3.6 Croadalla Avenue provides north/south connections from Chaucer Avenue and Smithfield Road to Southey Walk and Park View. Croadalla Avenue is a 7-metre-wide single carriageway road with 2-metre-wide footways and street lighting provided along both sides of the carriageway. Croadalla Avenue is residential in nature with residential dwellings located along both sides of the carriageway and is subject to a 30-mph speed restriction.

3.3.7 At its northern end Croadalla Avenue rounds a bend and becomes Smithfield Road. From this point Smithfield Road continues in an east-west alignment and provides connections to an extensive residential area, before being renamed Howbank Road and ultimately providing connections to the A595.

3.3.8 At its southern end, Croadalla Avenue forms priority-controlled junctions with St Bridgett's Lane to the east and Southey Avenue to the west, before being renamed Park View. Park View then provides access to further residential areas before terminating at a priority-controlled junction with Grove Road. Grove Road then provides access towards Egremont town centre to the east and towards St Bees to the west.

3.3.9 Baybarrow Road borders the How Bank Farm site. It provides a circa 7 metre carriageway and is subject to a 30-mph speed limit. To the west of the site Baybarrow Road provides access to residential areas, before terminating at a priority junction with Ashlea Road. Ashlea Road then connects with Grove Road to the south.

3.3.10 To the east of the How Bank Farm site Baybarrow Road firstly forms a priority-controlled junction with Goldsmith Road, which provides a further route to Grove Road, before being renamed Southey Avenue. Southey Avenue then terminates at the aforementioned junction with Croadalla Avenue.

3.3.11 From this junction connections are then provided to St Bridgett's Avenue. This residential road extends to the east, before rounding a bend at which point it is renamed Nelson Square. Nelson Square then forms a roundabout junction with Central Avenue and Tower View from which connections are available to Castle Villas. Castle Villas connects to Queens Drive to the south while to the north it leads into Egremont town centre and Main Street.

3.3.12 Main Street provides access to the majority of retail premises, general amenities, and food/drink establishments within Egremont. There are a range of retail establishments and services including food retail, general retail, pharmacy, and post office along with food and drink venue.

3.3.13 From the Castle Villas junction, the northern Main Street arm provides connections to Whitehaven and Workington via the A595, while to the south Main Street connects with 72 and then Vale View, which provide an alternative route to the A595 and to Sellafield to the south.

3.4 Road Safety Review

3.4.1 A review of accident records for the highway network in the direct vicinity of the site has been undertaken using data available on the Crashmap website. Crashmap uses data collected by the police about road traffic crashes occurring on British roads where someone is injured. This data is approved by the National Statistics Authority and reported on by the Department for Transport each year.

3.4.2 The Crashmap analysis has been undertaken for the 5-year period between 2015 and 2019 and is summarised in **Figure 3.2**.

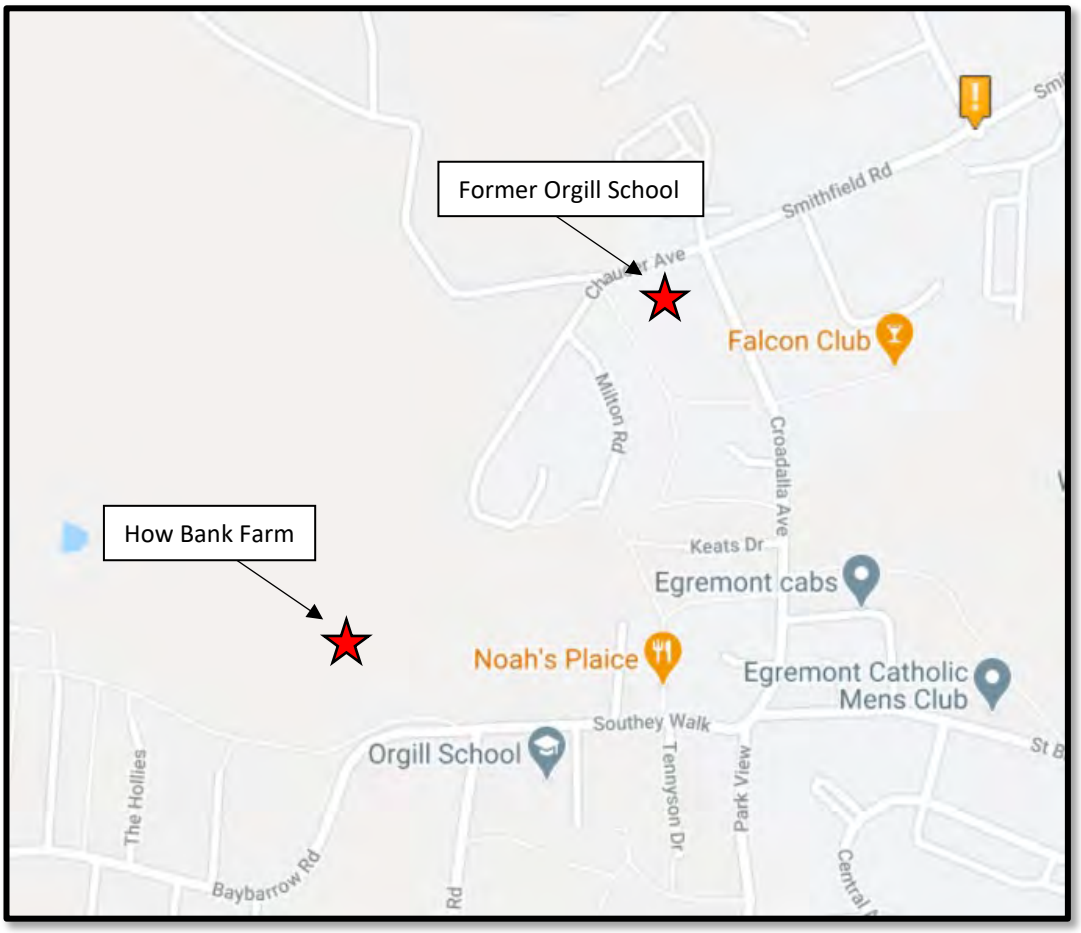


Figure 3.2: Accident Data **(Source: Crashmap.co.uk)**

3.4.3 As can be seen from **Figure 3.2**, the Crashmap data reveals that there have been no traffic collisions recorded on Baybarrow Road/Southey Walk near the How Bank Farm site. Likewise, there have been no incidents recorded on Croadalla Avenue, Chaucer Avenue or Smithfield Road in the vicinity of the former Orgill School site.

3.4.4 There has been one recorded incident on Smithfield Road to the east of the Orgill School site at the Smithfield Road/Gillfoot Road junction. This incident has been recorded as slight.

3.4.5 It can therefore be concluded that there are no accident blackspots on the highway network in the vicinity of the proposed development site.

4 ACCESSIBILITY BY SUSTAINABLE TRAVEL MODES

4.1 Introduction

4.1.1 The 'Promoting Sustainable Transport' section of the National Planning Policy Framework states that opportunities to promote walking, cycling and public transport use should be identified and pursued.

4.1.2 This section of the report therefore considers the accessibility of the site by the following modes of transport:

- Accessibility on foot;
- Accessibility by cycle;
- Accessibility by public transport.

4.2 Pedestrian Accessibility

4.2.1 The Institution of Highways and Transportation (IHT) document 'Guidelines for Providing for Journeys on Foot' (2000) contains suggested acceptable walking distances for pedestrians without mobility impairment for some common facilities. The guidelines suggest that an acceptable walking distance for commuting/school purposes is 1 kilometre, with a preferred maximum distance of 2 kilometres. Walking can also be promoted as part of a multi-modal journey, particularly with public transport.

4.2.2 The more recent CIHT document 'Planning for Walking' (2015) affirms this by stating that 80% of journeys shorter than a mile (approximately 1.6 kilometres) are made wholly on foot.

4.2.3 An analysis of the pedestrian catchment of the site has been completed to illustrate the site's 2-kilometre walking catchment which represents a journey of approximately 25 minutes. This is defined as a preferred maximum for trips carried out on foot by the Chartered Institution of Highways and Transportation (CIHT) document, entitled 'Guidelines for Providing for Journeys on Foot'.

4.2.4 The pedestrian catchment plan for the sites is shown on **Plan 4**, with the How Bank Farm site catchment in yellow and the Orgill School site catchment in blue. This demonstrates that the majority of Egremont, including the whole of the town centre is within the pedestrian catchment of the two sites.

4.2.5 Within Egremont town centre Main Street provides a wide range of day-to-day amenities including a supermarket, post office, cash machine, GP surgery, pharmacy, and dentist. The location of the key local facilities is shown in **Plan 5**. This plan also highlights the location of a number of amenities on Southey Avenue which are in closer proximity to the sites. These include a primary school, convenience store and take-away, which are approximately 250 metres from both sites.

4.2.6 In addition to these retail and civic amenities, there are industrial and employment land uses on the outskirts of the town which provide further employment opportunities to those provided in the town centre.

4.2.7 To support pedestrian trips street lit footways are provided along all roads in the vicinity of the sites. These are supported by dropped kerbs and tactile paving on the key pedestrian desire lines. A hard surfaced, street lit, public footpath is also located along the southern boundary of the How Bank Farm site and along the western boundary of the Orgill School site.

4.2.8 This pedestrian infrastructure provides safe connections from the sites to the surrounding education establishments and retail amenities, as well as connections to Egremont town centre. Within the centre of Egremont wide street lit footways are provided along both sides of Main Street, with signalised pedestrian crossing facilities also provided.

4.2.9 It is therefore concluded that the pedestrian facilities in the vicinity of the sites provide an excellent opportunity for trips to be undertaken on foot, with a number of local amenities conveniently located.

4.3 Accessibility by Cycle

4.3.1 Cycling is becoming an increasingly popular mode of transport and is an effective mode for short trips. The DfT's Local Transport Note 2/08 'Cycle Infrastructure Design' (2008) states that many utility cycle journeys are under 3 miles (approximately 5 kilometres) although for commuters a trip distance of over 5 miles is not uncommon.

4.3.2 Consequently, cycling has the potential to replace short car journeys, particularly those under 5 kilometres. At a leisurely cycle speed of 10 miles per hour this would equate to a journey of around 25 minutes.

4.3.3 **Plan 6** highlights a 5-kilometre cycle catchment from the sites along with all cycling facilities/infrastructure within the surrounding area. This would equate to a journey of around 25 minutes using a leisurely cycle speed of 12 kilometres per hour.

4.3.4 The 5-kilometre cycle catchment covers the whole of Egremont, in addition to a number of villages in the surrounding area, including Thornhill, Bigrigg and Cleator, along with St Bees. The significant employment site of Sellafield is approximately 7.5 kilometres from the site which is not an unreasonable cycle journey from Egremont.

4.3.5 To support trips by bicycle National cycle route 72 runs through the centre of Egremont. This route provides a connected on-road and traffic free cycle route running from Kendal along the Cumbrian coast to Barrow-in-Furness, Whitehaven and Silloth.

4.3.6 The site is therefore concluded to be accessible by bicycle.

4.4 Accessibility by Public Transport

Access by Bus

4.4.1 The closest bus stops to the site are located on Egremont Bypass and Main Street as shown on **Plan 4**. These stops are approximately 600 metres walking distance from the Orgill School site, and around 900 metres walking distance from How Bank Farm site.

4.4.2 While these walking distance is slightly further than typically desirable, the potential for residents to consider these bus services as a viable travel option does reflect recent NPPF guidance, which at Paragraph 103 states that "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".

4.4.3 On the basis of this guidance, the bus stops on are considered accessible from the proposed development sites.

4.4.4 **Table 4.1** provides a summary of the bus services and frequencies that operate along Main Street and Egremont Bypass.

Service	Route	Monday - Friday				Sat	Sun
		AM Peak	Daytime	PM Peak	Evening		
30	Maryport - Whitehaven - Egremont - Thornhill	2	2	2	1	2	1
X30	Whitehaven - Egremont	-	1	-	-	1	-

Table 4.1: Bus Services to/from Egremont

4.4.5 As can be seen from **Table 4.1**, the route 30 provides a service to key destinations such as Whitehaven and Workington throughout the day at weekends.

4.4.6 In addition to public bus services, there are also some dedicated services operated for employees of the Sellafield site, which is a significant local employer. Services include the following:

- A shuttle service from the company's Whitehaven offices and the Sellafield site, via Egremont. This runs every 15 minutes between 8am and 4pm, with very limited services before and after these times. This service stops at the car park on Chapel Street in the centre of Egremont town centre.
- A park and ride service from the Moresby Parks park and ride (to the east of Whitehaven), via Cleator Moor and Egremont to the Sellafield site. This provides 9 services between 06:15 and 09:15 in the morning and 11 return services between 11:15 and 5:20pm.

4.4.7 The proposed development site is therefore concluded to be accessible by public transport.

Access by National Rail

4.4.8 As shown in **Plan 6,** St Bees National Railway Station is within a 5km cycle of the site. St Bees is managed by Northern Trains with a local stopping service operating between Barrow-In-Furness and Carlisle. Stops along this route include Millom, Sellafield, and Whitehaven. Services operate on an hourly frequency in both directions Monday to Sunday with earlier and later trains operating during the week and on Saturdays.

4.5 Summary

4.5.1 Overall, the review of the site has identified that it is in a sustainable location and therefore is ideally placed to be able to positively promote and encourage trips by walking, cycling or public transport, rather than being reliant on the private car. The site's sustainable location is enhanced by virtue of its proximity to a range of day-to-day amenities, including those located in Egremont town centre.

5 DEVELOPMENT PROPOSALS

5.1 Introduction

5.1.1 This report considers the development proposals for both the How Bank Farm and former Orgill School sites and outlines the access strategy for both sites.

5.2 Proposed Development

5.2.1 The planning application relates to the redevelopment of two sites in Egremont, with the How Bank Farm site lying approximately 150 metre to the southwest of the former Orgill School site.

5.2.2 The proposed site layout for both sites is shown in **Plan 3**.

5.2.3 It is proposed that the How Bank Farm site provide a total of 97 dwellings comprising:

- 12 x 2-bedroom dwellings;
- 31 x 3-bedroom dwellings;
- 32 x 3-bedroom dwellings; and,
- 22 x 4-bedroom dwellings.

5.2.4 Meanwhile, the former Orgill School site will provide a total of 17 dwellings, all of which will provide 3 bedrooms.

5.3 Internal Site Layout

How Bank Farm Site

5.3.1 The proposed internal road network has been designed in accordance with Cumbria County Council's Development Design Guide. The internal access road provides a width of 5.5 metres, with 2 metre footways provided on each side of the carriageway.

5.3.2 The internal road network has been designed to encourage low vehicle speeds, thus creating a pedestrian and cycle friendly environment. The proposed layout features a short section of 'shared surface' for access to some of the properties in the centre of the site. These sections will be 4.8 metres wide.

Former Orgill School Site

5.3.3 The proposed internal road network has been designed in accordance with Cumbria County Council's Development Design Guide. The internal road network has been designed to encourage low vehicle speeds, thus creating a pedestrian and cycle friendly environment.

5.3.4 The proposed layout features two short sections of 'shared surface' for access to the properties within the site. These roads will be designed as shared private driveways and will be 4.2 metres wide. Each road will provide access to five residential dwellings. There will be seven dwelling fronting either Chaucer Avenue or Croadalla Avenue with driveways and footways providing direct access to these roads.

5.4 Parking

5.4.1 Each proposed residential dwelling will provide off-street car parking provision on private driveways with a minimum of two parking spaces per dwelling. The highway authority's guidelines require 1 visitor space per 5 dwellings. Therefore, the How Bank Farm site should provide 20 visitors spaces and the former Orgill School site should provide 4 visitor spaces.

5.4.2 The How Bank Farm site will provide 15 visitors spaces spread throughout the site. While this is slightly below the Council's parking requirements, the How Bank Farm site will provide a 5.5 metre carriageway width which is sufficient to allow two light vehicles, or a light and heavy vehicle (e.g. a refuse vehicle) to pass safely. On this basis and given how lightly trafficked the proposed development access road will be, it is considered appropriate for some visitors to the development to park on-street.

5.4.3 The former Orgill School site will provide 4 visitor spaces in accordance with the Councils parking requirements. Parking on-street will be actively discouraged within this site due to the shared surface nature of the roads within the development.

5.5 Vehicle Access

Access – How Bank Farm

5.5.1 Vehicle access to the site is proposed from a priority-controlled junction with Baybarrow Road. This access will be designed to adoptable standards in line with Cumbria County Council's Development Design Guide.

5.5.2 The junction provides visibility splays of 2.4 m x 43m as are appropriate for a 30mph based upon Cumbria County Council/ Manual for Streets guidance. This is illustrated in **Plan 7**.

5.5.3 The proposed internal layout has been tracked using an 11.2 metre refuse vehicle. This assessment demonstrates that all required vehicle movements can be safely undertaken.

5.5.4 Refuse collection vehicles are able to stop within approximately 30 metres of all properties. This meets the guidelines set by Cumbria County Council/ Manual for Streets guidance on the maximum distance that residents can transport waste for collection.

Access – Former Orgill School

5.5.5 Vehicle access to the dwellings on the former Orgill School site is proposed from a number of locations. Four dwellings will have driveways providing direct access onto Chaucer Avenue, five dwellings will be accessed off Chaucer Avenue by way of a shared surface street, three dwelling will have driveways providing direct access onto Croadalla Avenue and five dwellings will be accessed of Croadalla Avenue by way of a shared surface street.

5.5.6 Refuse vehicles will not enter the site with collections occurring on-street in a similar manner to the existing residential dwellings on Chaucer Avenue and Croadalla Avenue.

5.6 Travel Plan

5.6.1 To promote resident's travel by sustainable means a Travel Plan is proposed. A Framework Travel Plan has been prepared to accompany the planning application, which provides a 'heads a terms' for a full Travel Plan to be prepared once the development is constructed. The Framework document is provided in **Appendix A**.

6 TRAFFIC IMPACT ASSESSMENT

6.1 Introduction

6.1.1 This section of the report provides a traffic impact assessment of the development proposals.

6.2 Traffic Generation

6.2.1 To understand the potential traffic generation of the proposed development reference has been made to the TRICS database version 7.7.2 for the 'Residential – Houses Privately owned' range of sites. The assessment has focussed upon sites in comparable locations and of a similar scale.

6.2.2 **Table 6.1** summarises the traffic generation of the proposed development for typical network AM and PM peak hours, with the full TRICS report provided at **Appendix B.**

Time	Trip Rate		How Bank Farm Site Trips (97 dwellings)			Former Orgill School Site Trips (17 dwellings)		
	Arr	Dep	Arr	Dep	2 Way	Arr	Dep	2 Way
08:00-09:00	0.179	0.351	17	34	51	3	6	9
17:00-18:00	0.340	0.141	33	14	47	6	2	8

Table 6.1: Trip Rates and Trip Generation

6.2.3 As can be seen from **Table 6.1**, the development on the How Bank Farm site is forecast to generate 51 two-way trips during the AM peak period and 47 two-way trips during the PM peak hours.

6.2.4 Meanwhile the development on the former Orgill School site is forecast to generate 9 two-way trips during the AM peak period and 8 two-way trips during the PM peak period.

6.3 Traffic Impact Assessment

6.3.1 Given the level of traffic flows generated by the How Bank Farm site a capacity assessment has been undertaken of the proposed site access junction with Baybarrow Road, along with a consideration of the impact of development traffic on the wider highway network.

6.3.2 However, given the low number of vehicle trips associated with former Orgill School site development it is considered that this will have an imperceptible impact upon the safe and efficient operation of the surrounding roads. Therefore, no further analysis of this site has been undertaken.

6.4 Baseline Traffic Flows

6.4.1 During scoping discussions with Cumbria County Council, it was confirmed that traffic flows had increased sufficiently following the COVID-19 lockdown to allow traffic surveys to resume.

6.4.2 Therefore, to determine baseline traffic flows on Baybarrow Road passing the proposed site access a traffic survey was undertaken on Thursday 10th September 2020 during the weekday AM and PM peak hours. The raw survey data is included in **Appendix C**.

6.4.3 The traffic surveys revealed that the AM peak hour occurred between 08:00 – 09:00 with the PM peak hour occurring between 17:00 – 18:00.

6.4.4 **Figure 6.1** provides a summary of the baseline traffic flows.

6.5 Assessment Scenarios

6.5.1 In order to consider the impact of the development in a future year scenario the baseline traffic flows have been growthed to a 2025 future year scenario. This represents a period 5-year post planning application submission. **Table 6.2** provides a summary of TEMPro derived AM and PM growth factors for the Copeland 006 Middle Super Output Area.

	2020 – 2025 Growth Factors
AM Peak Period	1.0538
PM Peak Period	1.0373

Table 6.2: 2025 Growth Factor

6.5.2 The 2020 baseline traffic surveys have been growthed using these factors. The resultant 2025 baseline traffic flows are presented in **Figure 6.2**.

6.6 Committed Developments

6.6.1 No committed developments were identified during scoping discussions with Cumbria County Council highway officers.

6.7 Development Trip Distribution and Assignment

6.7.1 The baseline traffic surveys on Baybarrow Road were used to calculate a trip distribution for the proposed development on How Bank Farm. This distribution is presented in **Table 6.3**.

	AM Peak Period	PM Peak Period
Left onto Southey Walk	66%	57%
Right onto Baybarrow Road	34%	43%
Right from Southey Walk	66%	57%
Left from Baybarrow Road	34%	43%

Table 6.3: How Bank Farm Site Trip Distribution

6.7.2 The How Bank Farm traffic flows presented in **Table 6.1** have then been assigned to the proposed site access junction based upon these turning proportions.

6.7.3 The resultant development traffic flows are presented in **Figure 6.3**.

6.8 2025 Baseline with Development Traffic Flows

6.8.1 The proposed development traffic flows have been added to the 2025 Baseline flows to generate the 2025 Baseline with Development traffic flows. These are presented in **Figure 6.4**.

6.9 Capacity Assessments

6.9.1 The proposed How Bank Farm site access junction with Baybarrow Road, as illustrated in **Plan 7**, has been capacity tested using the JUNCTIONS 8 modelling software. A summary of the results of this assessment are presented in **Table 6.4** with the full model output provided at **Appendix D.**

Link	AM Peak		PM Peak	
	RFC	Queue (PCUs)	RFC	Queue (PCUs)
Site Access – Left and Right	0.06	0.07	0.03	0.03
Baybarrow Road (NE) – Right	0.02	0.02	0.04	0.04

Table 6.4: Site Access/Baybarrow Road/Southey Walk Junction Assessment

6.9.2 **Table 6.4** highlights that the proposed site access junction is forecast to operate significantly within capacity and without queuing.

6.10 Impact of the Development on the Wider Highway Network

6.10.1 As described in Section 3.3 the proposed developments are located within an intricate network of residential streets. This means that residents on both development sites will benefit from a variety of route choices when travelling to or from the site.

6.10.2 Traffic arriving or departing the How Bank Farm site to the west will likely route via Ashlea Road. Based upon the calculated distribution profile a maximum of 20 two-way vehicle trips are forecast to arrive/ depart from the west in the PM peak hour. This equates to an additional vehicle every 3 minutes. Such an increase in traffic flow will not alter the character or safety of this route, nor would it materially alter the operation of the Ashlea Road/ Grange Road junction.

6.10.3 The traffic distribution forecasts that a maximum of 23 vehicles will depart the site to the east in the AM peak hour, with 12 travelling in the opposite direction. Vehicles travelling in this direction have the choice of a variety of routes, for example Goldsmiths Road or Park View to access Grange Road, Croadalla Avenue to travel north to the A595, or St Bridgett's Lane to travel towards Egremont town centre. Assuming an evening split between the four routes this would equate to around 8 additional two-way vehicle trips per hour on each route, or an additional vehicle trip every 7.5 minutes. Clearly additional routes are available for this increase in traffic flow may be further diluted. Such changes in traffic flow will not materially alter the safe or efficient operation of the surrounding highway network.

6.10.4 It is therefore concluded that the variety of route options in the direct vicinity of the site would mean that new vehicle movements are unlikely to be concentrated on any single section of highway or junction. For this reason, the proposed development is would not be expected to have a material impact upon the operation of the surrounding highway network.

6.11 Summary

6.11.1 As highlighted, changes in traffic flow of this scale will have no material impact upon the safe and efficient operation of the surrounding highway network, and the proposed access onto Baybarrow Road is forecast to operate well within capacity. It is therefore concluded that the proposed development should be acceptable in traffic impact terms.

7 SUMMARY AND CONCLUSIONS

7.1 Introduction

7.1.1 Vectos has been commissioned by Gleeson Homes to provide traffic and transportation advice to support a planning application to for residential development on land at How Bank Farm and the ormer Orgill School in Egremont, Cumbria.

7.1.2 The planning application proposes the development of 97 dwellings on the How Bank Farm site, with 17 dwellings proposed on the former Orgill School site.

7.1.3 Access for the How Bank Farm site will be from Baybarrow Road with access for the Orgill School site taken from Chaucer Avenue and Croadalla Avenue.

7.1.4 This Transport Assessment has been prepared in accordance with recognised guidance and following pre-application discussions with the highway authority, Cumbria County Council. The report draws the following conclusions:

- In accordance with planning policy guidance, which promotes sustainable development, the site has been demonstrated to be accessible on foot, by bicycle and by public transport;
- The applicant has also proposed to adopt a Travel Plan to encourage resident's travel by sustainable means;
- A review of historical collision data has demonstrated that there are no existing accident blackspots in the vicinity of the site. Based upon the findings of the trip generation analysis it has been concluded that there is no reason to believe highway safety would be worsened as a result of the development proposals;
- The design of the internal site layouts, and site access junctions with Baybarrow Road, Chaucer Avenue and Croadalla Avenue, accord with Cumbria County Council's design guide;
- A traffic impact assessment has demonstrated that the proposed How Bank Farm access onto Baybarrow Road would operate within capacity, and development would have no material impact upon the safe and efficient operation of the surrounding highway network;
- Residents car parking is provided in accordance with the highway authority's adopted standards, while visitors are able to safely park on-street; and
- The sites can be safely serviced using an 11.2 metre refuse vehicle.

7.2 Transport Assessment Conclusions

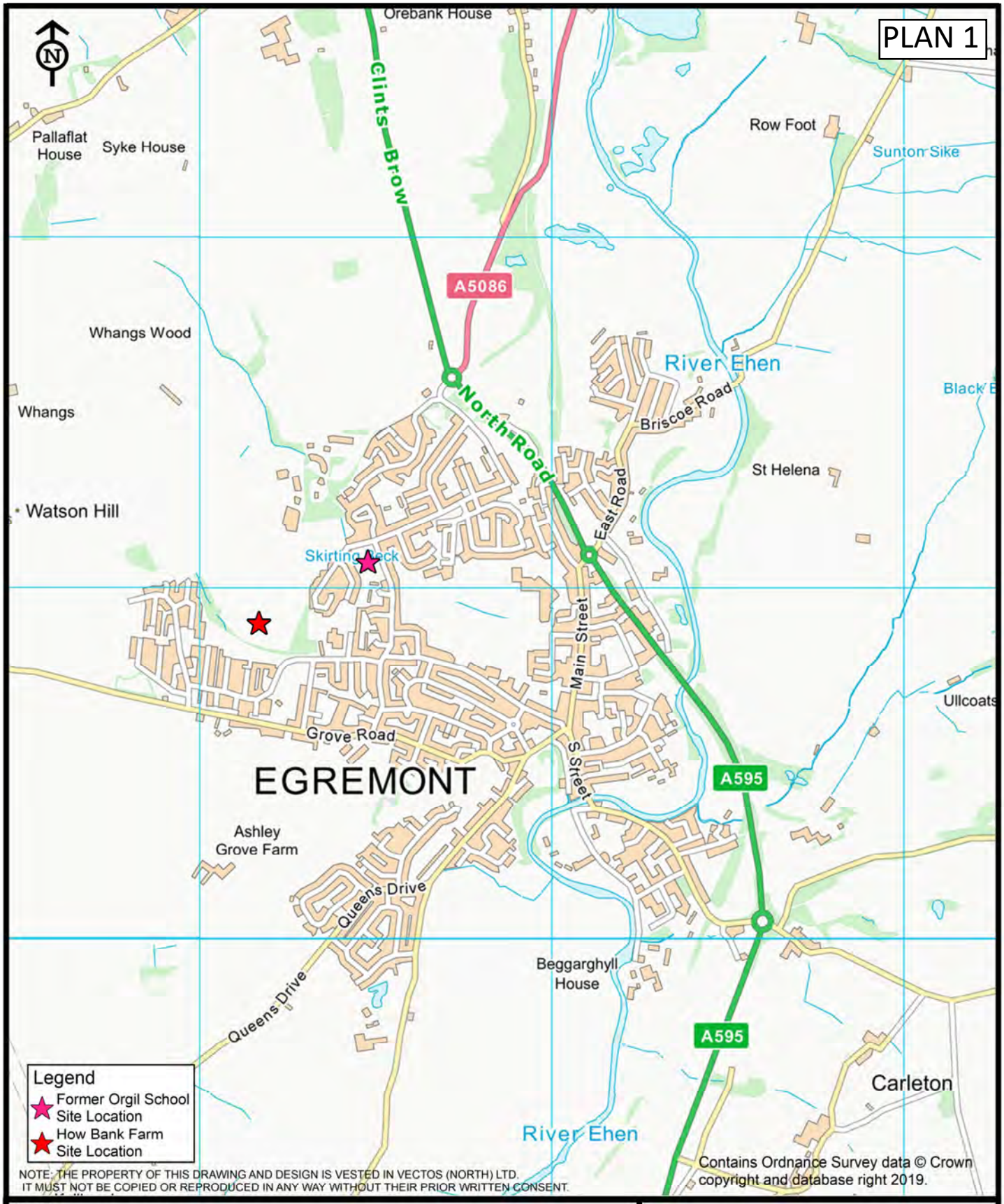
7.2.1 The development site is in a sustainable location, would not have a detrimental impact upon either the operation or safety of the local highway network, provides an appropriate quantum of car parking, and can be safely serviced.

7.2.2 The National Planning Policy Framework states that **"***Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe***".**

7.2.3 This report has demonstrated that the proposed development would have no impact upon highway safety and that the residual cumulative impacts of the proposed development would not be severe. Therefore, in accordance with NPPF guidance there are no reasons why the planning application should be refused on highway or transportation grounds.

PLANS

PLAN 1



CLIENT:
Gleeson Homes

PROJECT TITLE:
Land at How Bank Farm and Former Orgill School, Egremont

DRAWING TITLE:
Site Location - Wider Context

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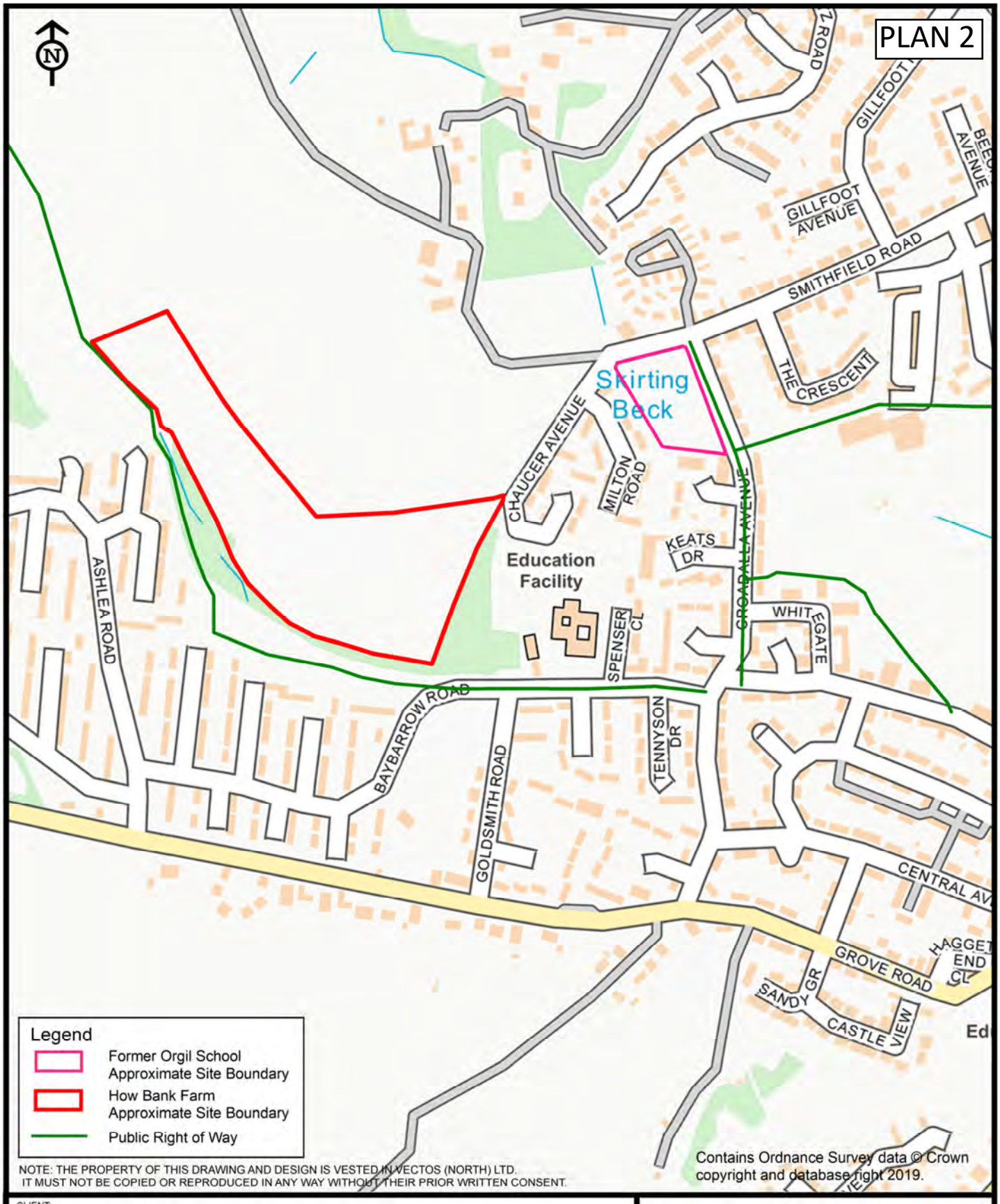
DRAWN:	CHECKED:	DATE	SCALE:	DRAWING NO:	REVISION:
TA	RW	Sep. 2020	1:15,000 at A4	VN201725-G100	.

PLAN 2



CLIENT:
Gleeson Homes

PROJECT TITLE:
Land at How Bank Farm and Former Orgill School, Egremont

DRAWING TITLE:
Site Location - Local Context

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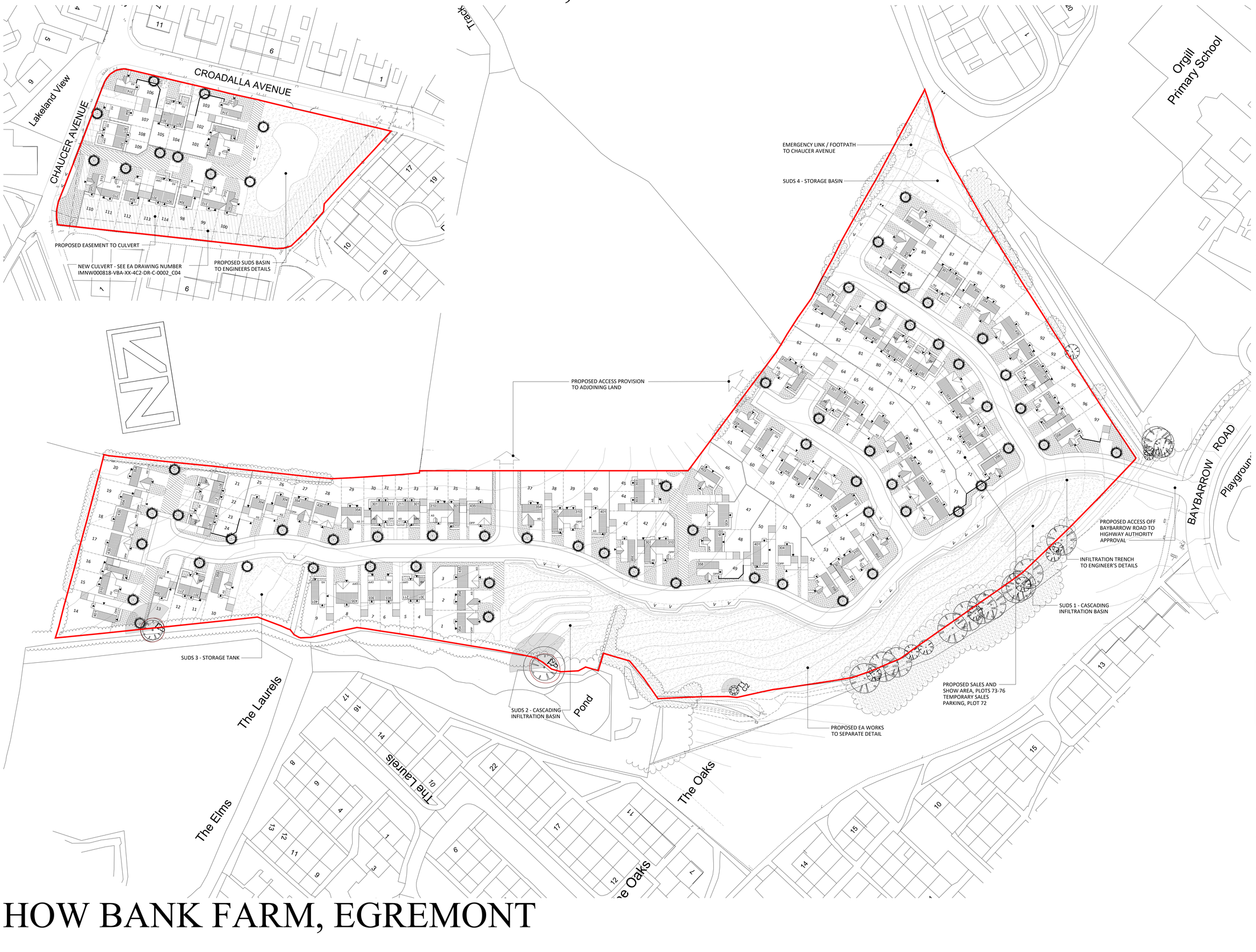
DRAWN:	CHECKED:	DATE	SCALE:	DRAWING NO:	REVISION:
TA	RW	Sep. 2020	1:5,000 at A4	VN201725-G101	.

FORMER ORGILL INFANTS SCHOOL, EGREMONT

0m 5m 10m 20m 30m 40m 50m 100m
SCALE BAR @ 1:500



KEY

- 1.8m HIGH TIMBER SCREEN FENCE TO SEPARATE DETAIL
- 1.8m HIGH TIMBER SCREEN DIVISIONAL FENCE TO SEPARATE DETAIL
- 1.8m HIGH SCREEN WALL TO SEPARATE DETAIL
- PROPOSED TREE PLANTING
- EXISTING TREES TO BE REMOVED
- SHARED DRIVE
- AS / OPP — 'AS' AND 'OPP' HANDINGS OF HOUSE TYPES

SCHEDULE OF ACCOMMODATION - HOW BANK FARM

TYPE	NAME	DESCRIPTION	SQ.FT	No.
211	Boston	2 bed semi-det.	651	11
301	Tyrone	3 bed semi-det.	759	20
303	Wicklow	3 bed semi-det.	772	4
310s	Woodford	3 bed semi-det.	788	7
304	Killkenny	3 bed detached	772	12
354	-	3 bed detached	904	13
358	-	3 bed detached	984	8
401	Longford	4 bed detached	1066	6
403	Carlow	4 bed detached	1048	4
435	Dublin	4 bed detached	1172	12
TOTAL			**84,485 SQ.FT**	**97No.**

SCHEDULE OF ACCOMMODATION - FORMER ORGILL INFANTS SCHOOL

TYPE	NAME	DESCRIPTION	SQ.FT	No.
301	Tyrone	3 bed semi-det.	759	7
310s	Woodford	3 bed semi-det.	788	3
313	-	3 bed semi-det	772	2
304	Killkenny	3 bed detached	772	3
314	-	3 bed detached	772	2
TOTAL			**13,081 SQ.FT**	**17No.**

REV	DESCRIPTION	DATE
A	ACCESS AMENDED TO HOW BANK FARM; TOPO INFO ADDED TO ORGILL SCHOOL.	06.10.20

gleeson

GLEESON HOMES & REGENERATION

DRAWING
PLANNING LAYOUT

PROJECT
HOW BANK FARM & FORMER ORGILL INFANTS SCHOOL, EGREMONT

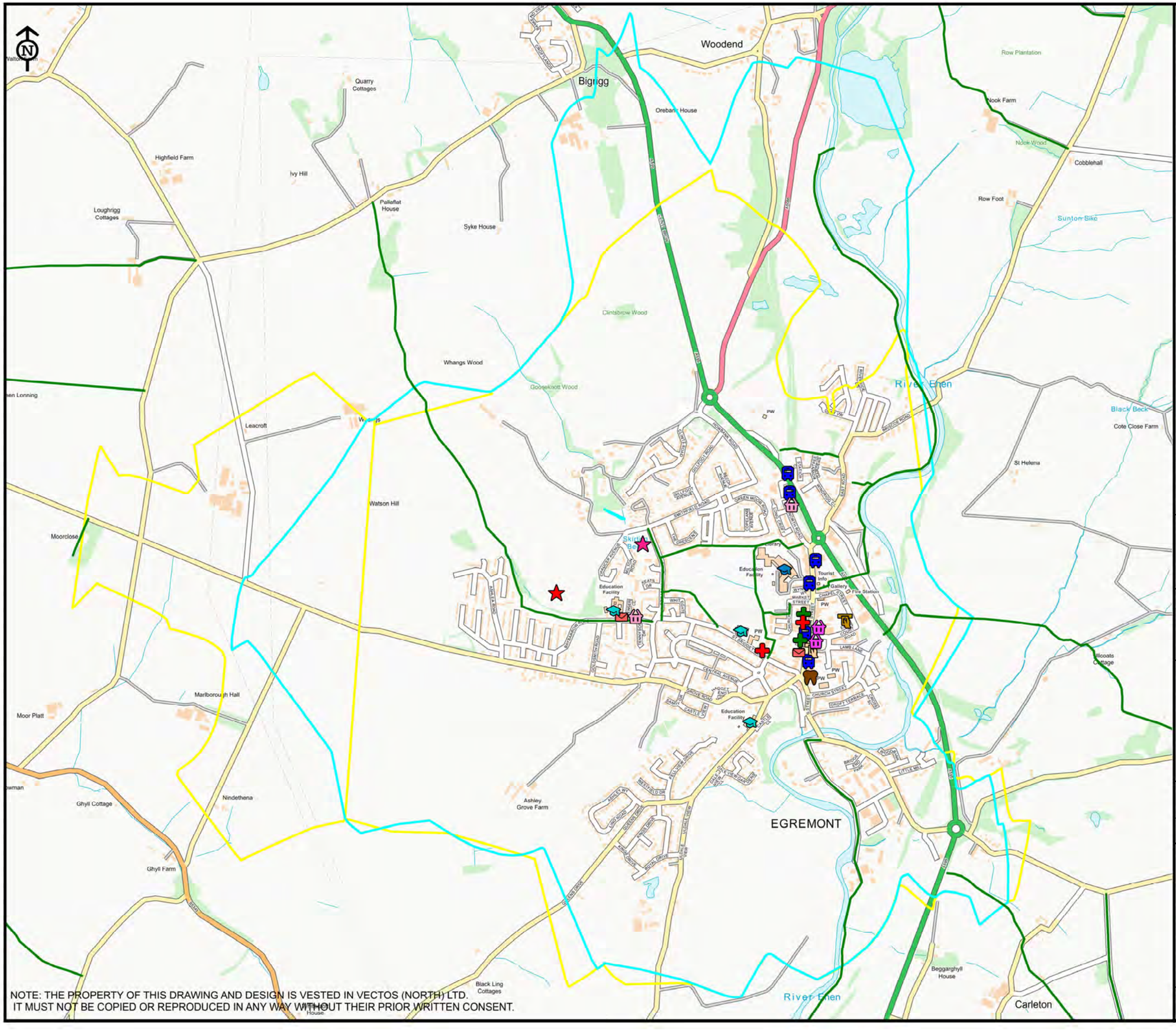
SCALE	1:500@A0	REV.	A
DATE	SEP 2020		
DRAWN	TWENTY10		

DRAWING No.
MJG/PL-111

TWENTY 10
DESIGN AND PLANNING
Twenty10 Management Limited, 62 Hawkshead Avenue, Euxton, Chorley , Lancashire . PR7 6TE
Tel: (01257) 277 100 Email: info@twenty10.biz Fax: (01257) 268 911

HOW BANK FARM, EGREMONT

PLAN 4



Legend

- Former Orgil School SIte Location
- How Bank Farm Site Location
- Bus Stop
- Primary School
- Secondary School
- GP Surgery
- Dentist
- Newsagent/Post Office
- Convience Store
- Supermarket
- Pharmacy
- Mobile Bank
- Cash Machine/ATM
- Public Right of Way
- Former Orgill School 2km Walking Catchment
- How Bank Farm 2km Walking Catchment

This is not a construction drawing and is intended for illustrative purposes only.

CLIENT:

Gleeson Homes

PROJECT TITLE:

Land at How Bank Farm and Former Orgill School, Egremont

DRAWING TITLE:

Pedestrian Walking Catchment

SCALE: N.T.S

DRAWN:	CHECKED:	DATE:
TA	RW	Sep. 2020

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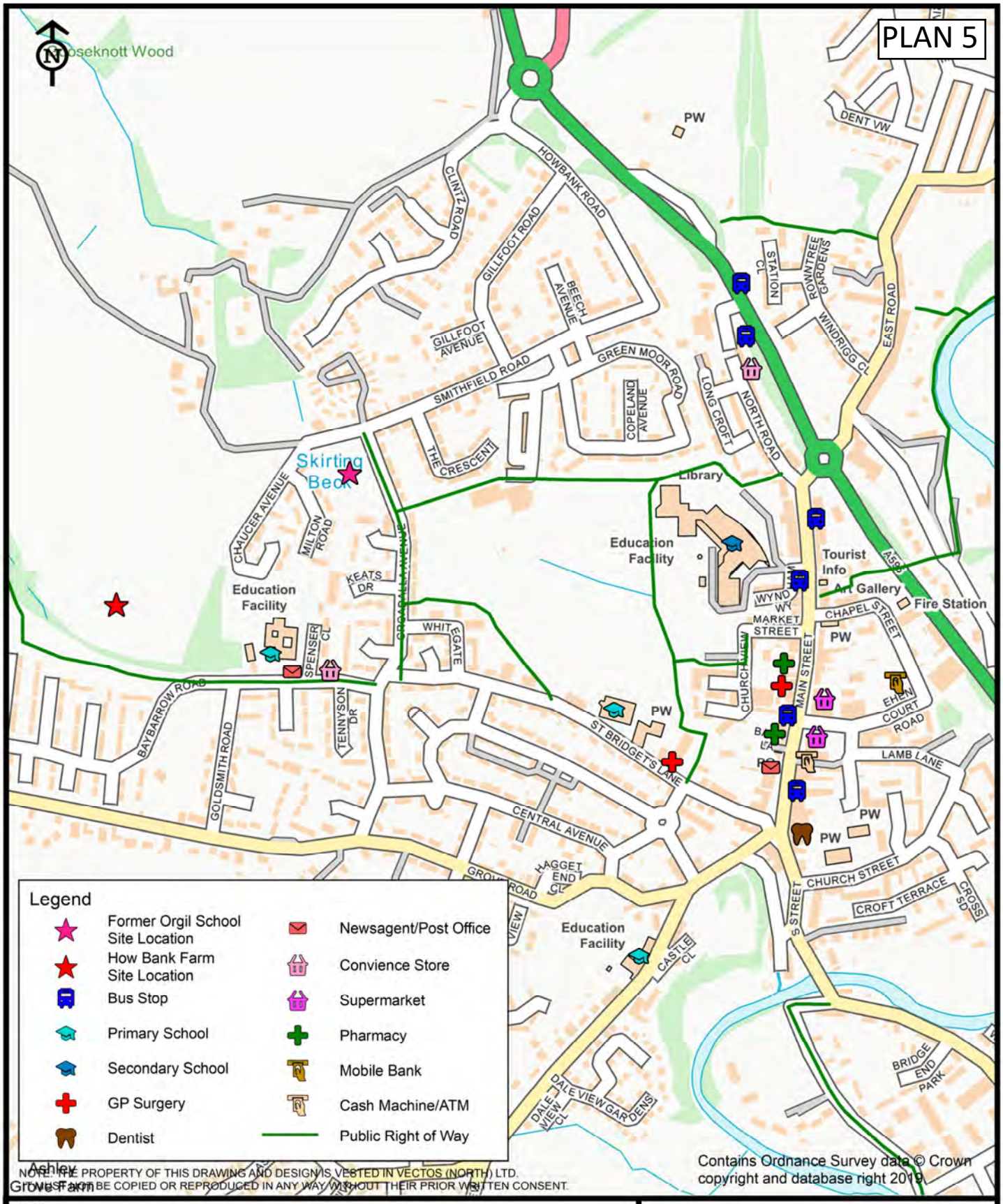
DRAWING NO: VN201725-G103

REVISION:

PLAN 5



CLIENT:
Gleeson Homes

PROJECT TITLE:
Land at How Bank Farm and Former Orgill School, Egremont

DRAWING TITLE:
Site Location - Local Amenities

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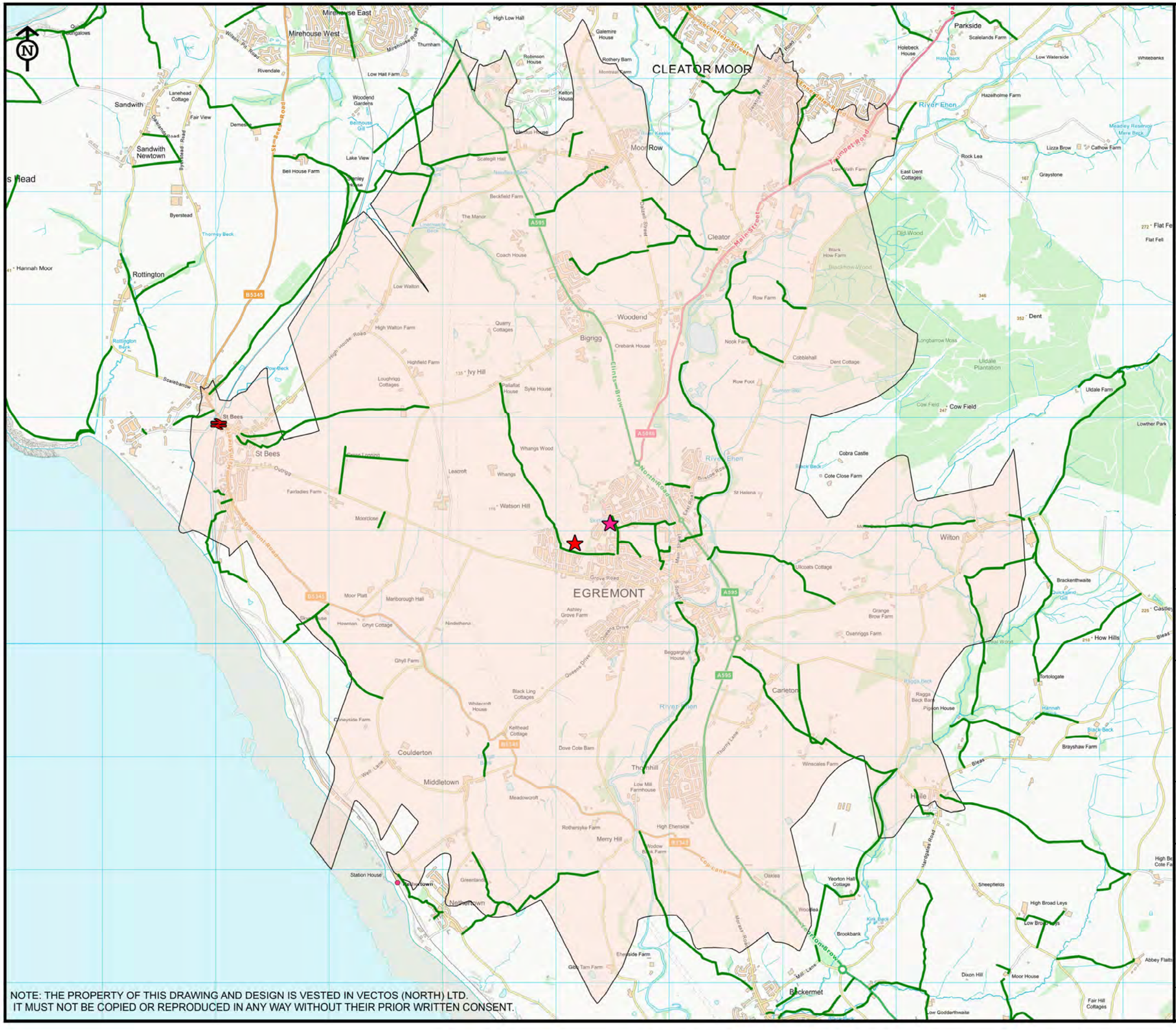
DRAWN:	CHECKED:	DATE	SCALE:	DRAWING NO:	REVISION:
TA	RW	Sep. 2020	N.T.S	VN201725-G102	.

PLAN 6



Legend

- Former Orgil School Site Location
- How Bank Farm Site Location
- Railway Station
- Public Right of Way

Cycling Catchment

- 0 - 5km

This is not a construction drawing and is intended for illustrative purposes only.

CLIENT:
Gleeson Homes

PROJECT TITLE:
Land at How Bank Farm and Former Orgill School, Egremont

DRAWING TITLE:
Cycling Catchment

SCALE:
N.T.S

DRAWN:	CHECKED:	DATE:
TA	RW	Sep. 2020

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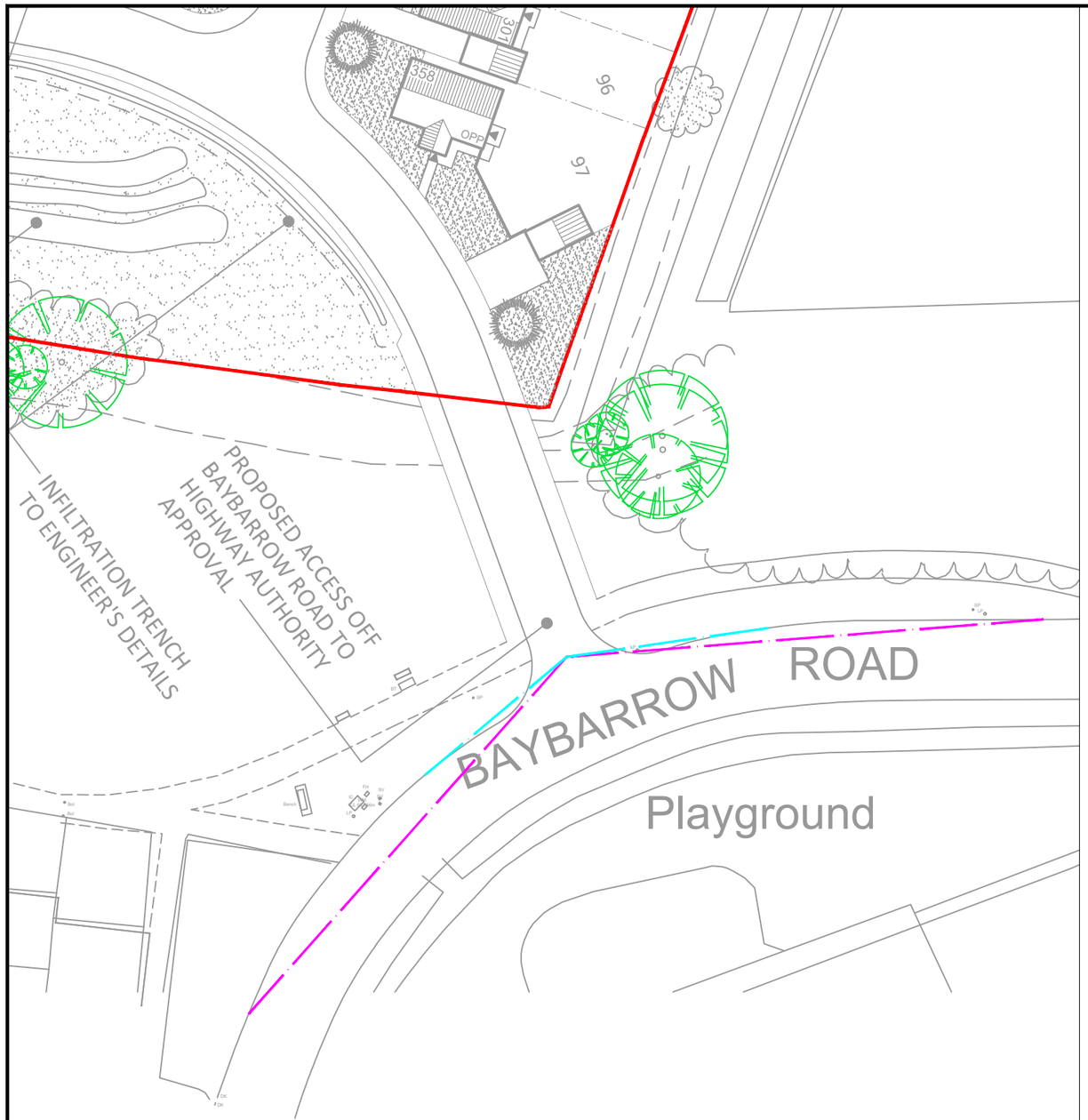
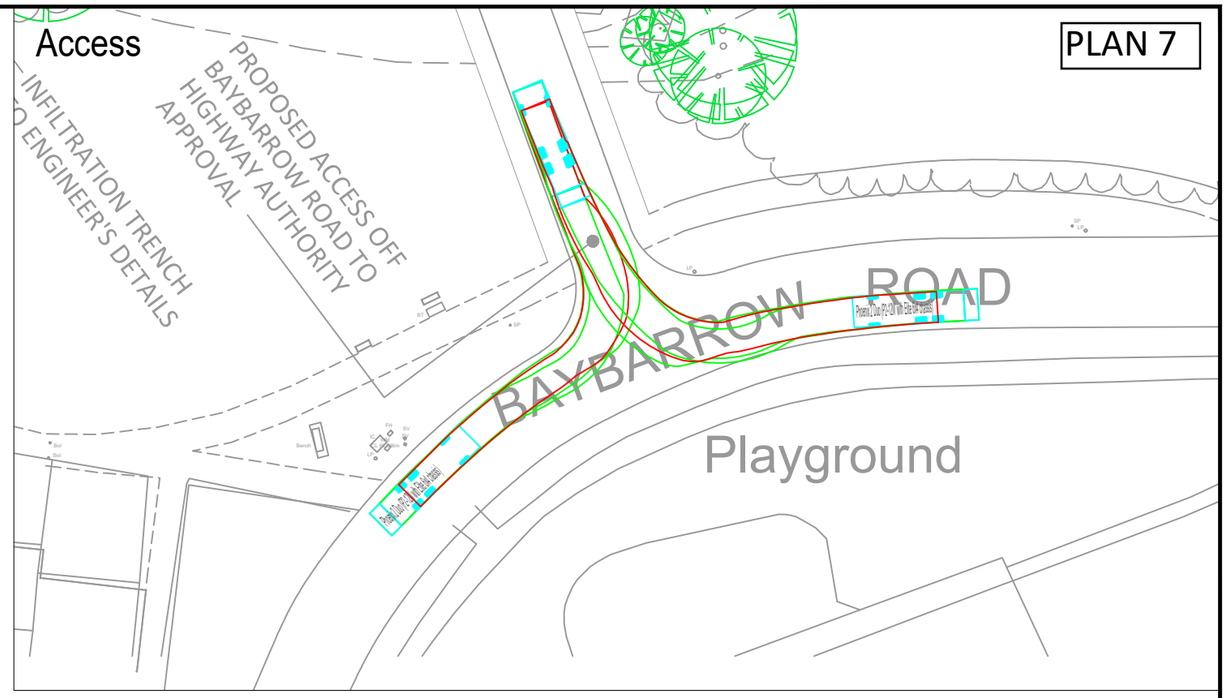
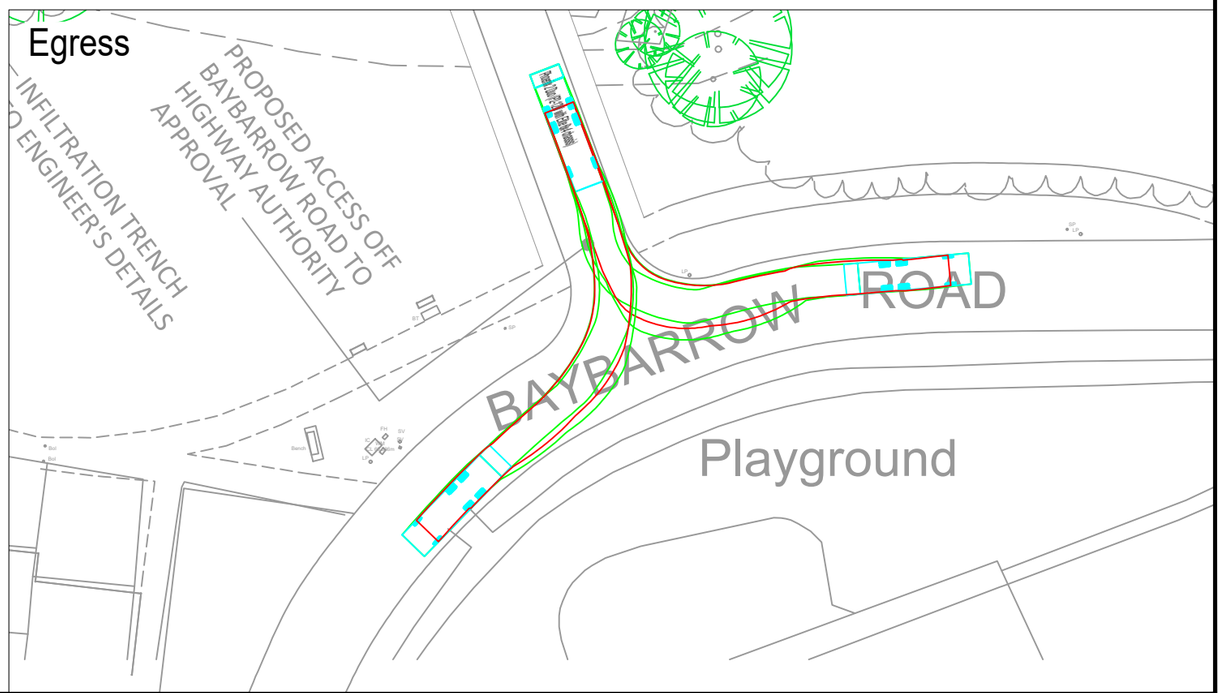
DRAWING NO: VN201725-G105

REVISION:







REV.	DETAILS	DRAWN	CHECKED	DATE
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Notes:

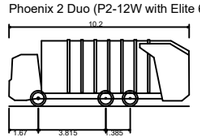
1. This is not a construction drawing and is intended for illustrative purposes only.
2. White lining is indicative only.

Key

2.4 x 43m Visibility Splays

2.4 x Visibility Splays to Tangent of Kerb

Phoenix 2 Duo (P2-12W with Elite 6x4 chassis)



Overall Length	10.200m
Overall Width	2.530m
Overall Body Height	3.751m
Min Body Ground Clearance	0.304m
Track Width	2.500m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	7.800m

Land at Egremont

Gleeson Homes

Access Arrangements & Swept Path Analysis

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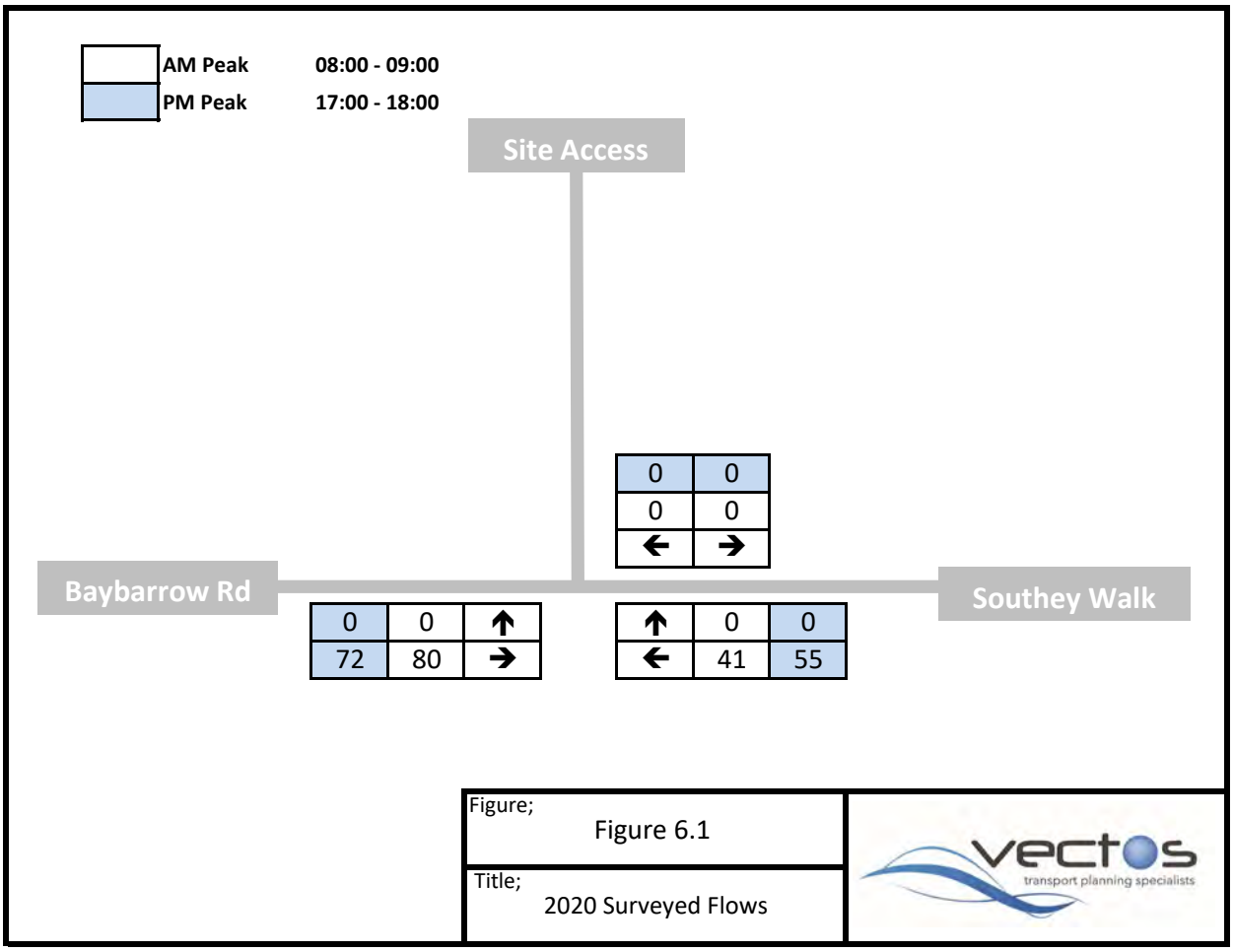
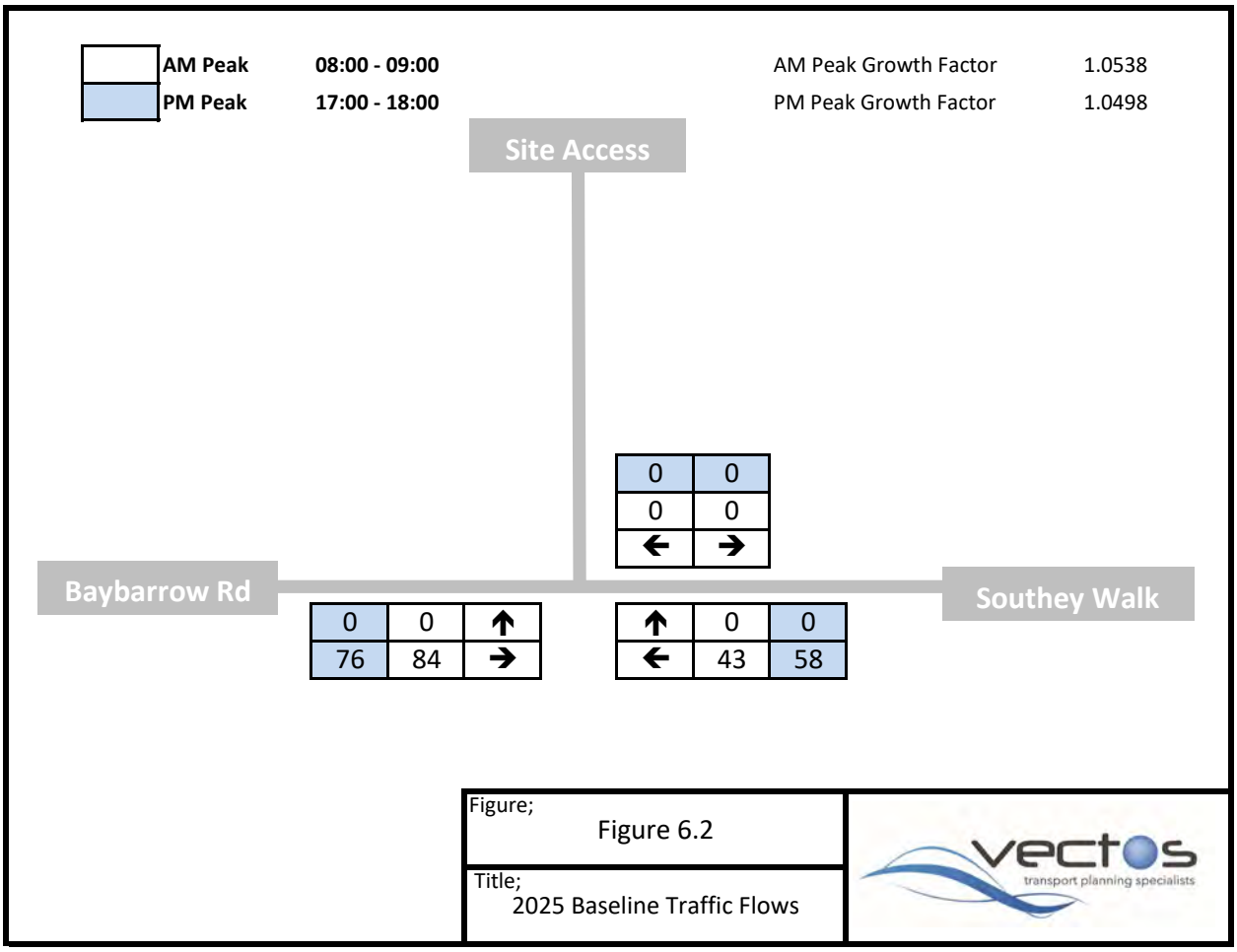
DRAWN:	CHECKED:	DATE:	SCALES:	DRAWING NUMBER:	REVISION:
WD	RW / TA	07.10.20	1:500 at A3	VN201725-D101	·

FIGURES

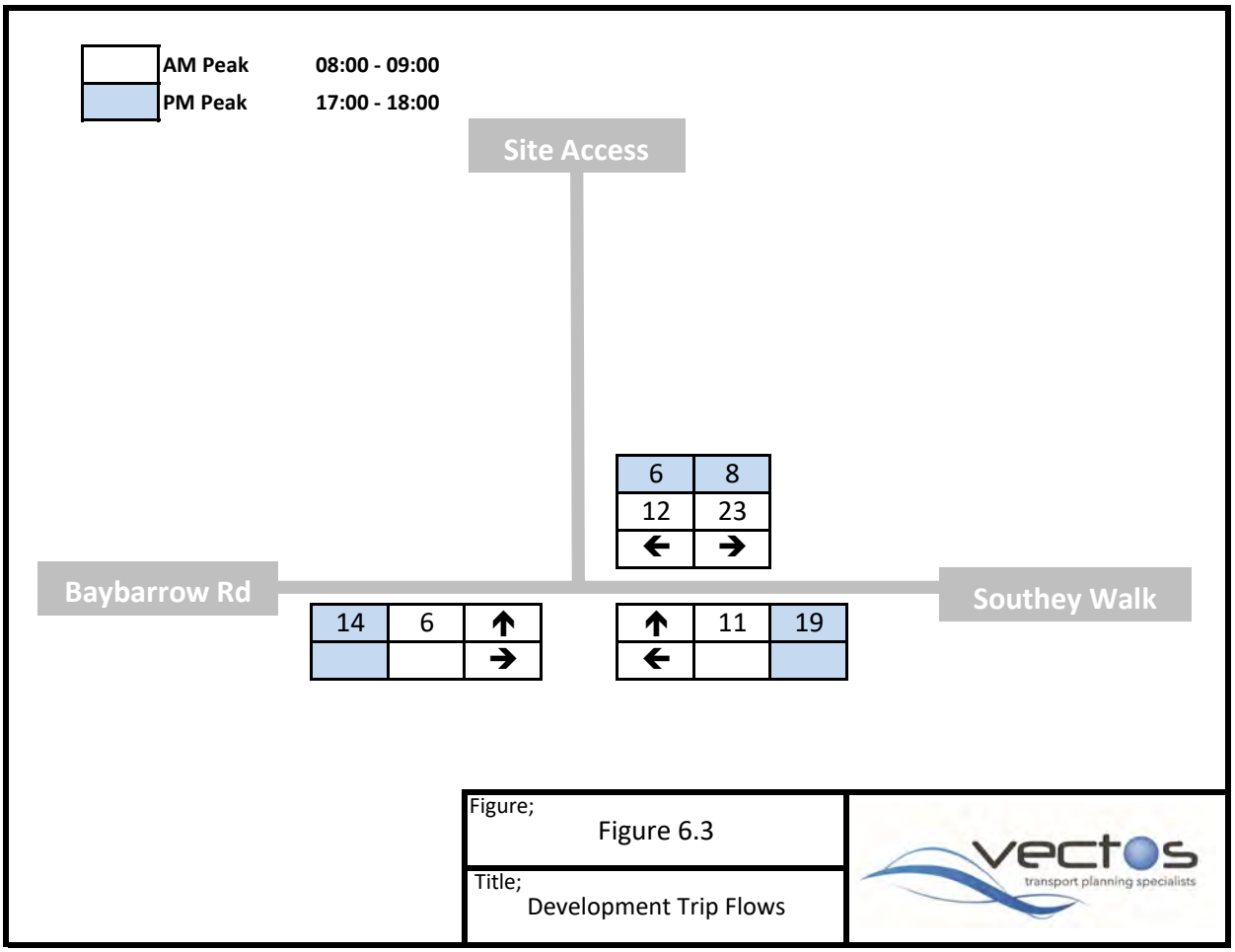


Figure;	Figure 6.1
Title;	2020 Surveyed Flows



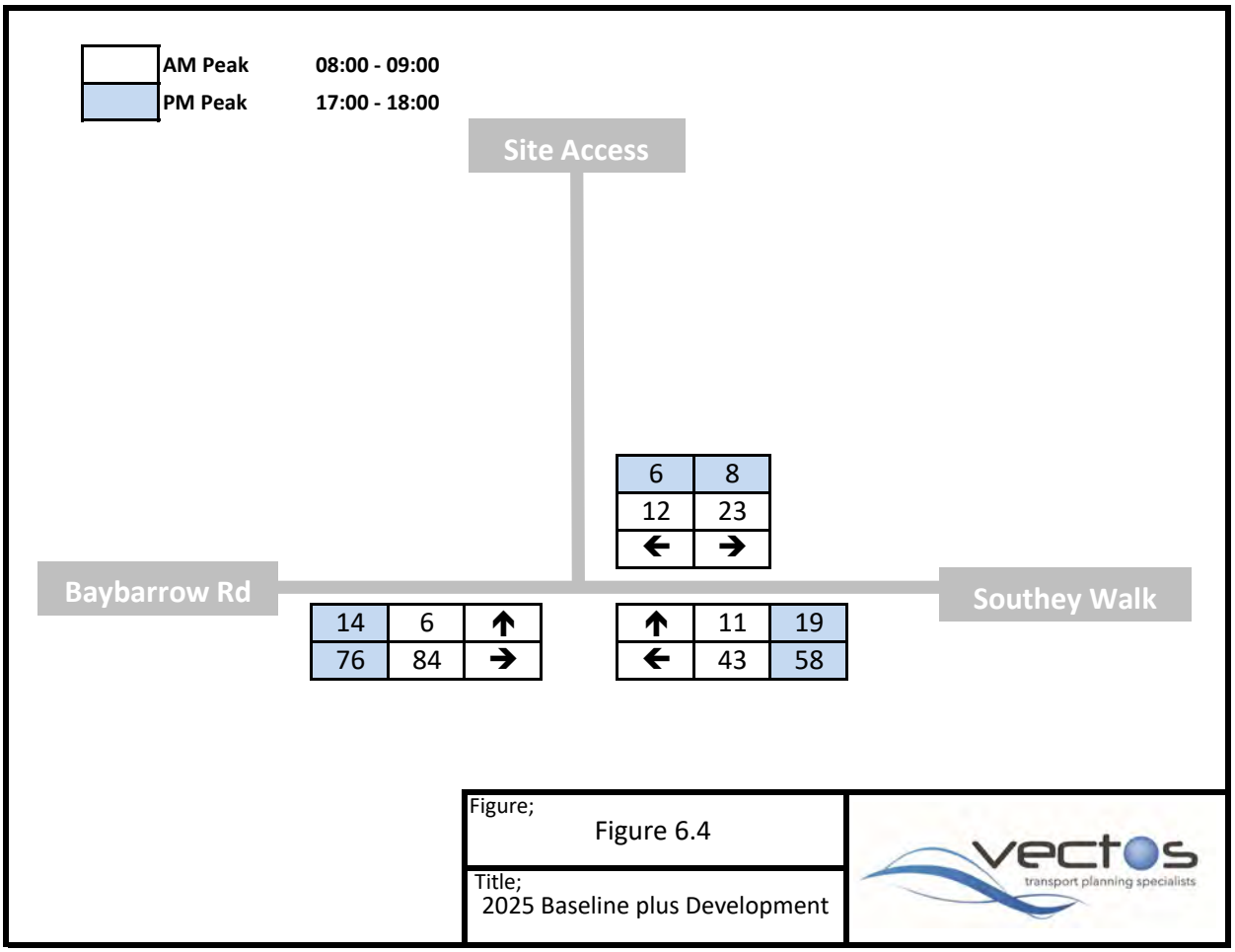
Figure;
Figure 6.2

Title;
2025 Baseline Traffic Flows



Figure;
Figure 6.3

Title;
Development Trip Flows



Figure;
Figure 6.4

Title;
2025 Baseline plus Development

APPENDICES

APPENDIX A

Framework Travel Plan

Gleeson Homes

PROPOSED RESIDENTIAL DEVELOPMENT, LAND AT HOW BANK FARM, EGREMONT AND FORMER ORGILL SCHOOL, EGREMONT

Interim Travel Plan

VN201725

October 2020

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Tel: 0161 228 1008 www.vectos.co.uk
Company no. 07794057
Registered address: Vectos North Limited, 4th Floor Oxford Place, 61 Oxford Street, Manchester, M1 6EQ

REPORT CONTROL

Document:	Interim Travel Plan
Project:	Proposed Residential Development, Land at How Bank Farm, Egremont and Former Orgill School, Egremont
Client:	Gleeson Homes
Job Number:	VN201725
File Origin:	N:\Vectos Job Data\2020\VN201725 Land at Egremont\ Docs\Reports\VN201725 Land at Egremont TP V2.docx

Document Checking:

Primary Author	Tim Ashley	**Initialled:**	TA
Contributor	Tom O'Grady	**Initialled:**	TO
Review By	Richard Whiting	**Initialled:**	RW

Issue	Date	Status	Checked for Issue
1	07.10.20	V1	RW
2	08.10.20	V2	RW
3			

CONTENTS

PLANS

1 INTRODUCTION

1.1 Background

1.1.1 Vectos has been commissioned by Gleeson Homes to provide traffic and transportation advice to support a planning application to develop land at How Bank Farm and the former Orgill School in Egremont, Cumbria.

1.1.2 This Transport Statement provides information on the traffic and transport planning aspects of the development proposals and forms supplementary information to assist in the determination of the planning application.

1.1.3 The planning application relates to the redevelopment of two sites in Egremont. Both sites lie to the west of Egremont town centre, with the How Bank Farm site lying approximately 150 metres to the south west of the former Orgill School site.

1.1.4 The strategic location of the two sites is shown in **Plan 1**, with **Plan 2** showing the sites in a more local context.

1.1.5 The detailed planning application will cover both sites with the How Bank Farm site providing 97 dwellings and the former Orgill School providing a further 17 dwellings. As such, the planning application will propose a total of 114 units. Access to the How Bank Farm site is proposed from Baybarrow Road with access to the Orgill School site proposed from Chaucer Avenue and Croadalla Avenue.

1.1.6 The proposed site layout for both sites is shown in **Plan 3**. This plan also shows the application red line boundary.

1.1.7 A Transport Assessment (TA) has also been prepared to support the planning application which provides a detailed description of the development proposals for the site. This Framework Travel Plan should be read in conjunction with the TA.

1.2 Travel Plan Objectives

1.2.1 This Travel Plan is intended to form the basis of a long-term strategy for reducing dependence on travel by private car. It reflects the following transport objectives:

- Reduce reliance on single occupancy car journeys;
- Promote alternative modes of travel to the car;
- Advocate means of travel that are beneficial to the health of those living at or visiting the site;
- Minimise car travel in the area surrounding the site, cutting down on associated costs (environmental, financial, health, etc.); and
- Contain parking demand.

1.2.2 In addition, it is envisaged that there are likely to be a number of benefits to the local community which can be achieved through encouraging the use of sustainable transport. These include:

- Improved air quality and less noise, dirt and fumes;
- Walking and cycling can provide daily exercise and thus improve/maintain health; and
- Increasing the modal shift from private motor vehicle to sustainable modes of transport can help reduce congestion on the local and national road network.

1.3 Report Detail

1.3.1 This Framework Travel Plan (FTP) has been prepared, to consider travel to and from the Site for residents and outlines a number of suggested initiatives and measures that will allow sustainable modes of travel to be positively promoted, and includes the following information:

- Context of the Site;
- Travel Plan Initiatives;
- Travel Plan Administration, Monitoring and Review; and
- Action Plan.

2 LOCAL CONTEXT

2.1 Site Location

2.1.1 The proposed development sites are located approximately 800 metres to the west and northwest of Egremont town centre.

2.1.2 The areas surrounding the sites are predominantly residential in nature, with areas of open space located to the north and west of both sites.

2.1.3 Of the two sites the How Bank Farm site is currently undeveloped open space, with no vehicle access currently available to the land within the application red line. The northern of the two sites previously accommodated Orgill School, with vehicle access provided from Chaucer Avenue. The Orgill School site has also been cleared of all built development, although a dropped kerb provision remains on Chaucer Avenue.

2.2 Surrounding Highway Network

2.2.1 The sites are located within an intricately connected road network, which provide a multitude of route choices for local residents.

2.2.2 The main site access for the How Bank Farm site will be taken from Baybarrow Road with access for the former Orgill School site taken from Chaucer Avenue and Croadalla Avenue.

2.2.3 The highway network in the vicinity of the sites is illustrated in **Figure 2.1** below and described in the following paragraphs.

Figure 2.1: Surrounding Highway Network

2.2.4 Chaucer Avenue forms the northern boundary of the Orgill School site. Chaucer Avenue is a 5.5-metre-wide single carriageway road subject to a 30-mph speed restriction and provides a footway along the southern boundary of the carriageway. Chaucer Avenue provides connections to a small residential development to the west of the Orgill School site and does not serve as a through route for traffic.

2.2.5 In the northeast corner of the site Chaucer Road forms the minor arm of a priority-controlled junction with Croadalla Avenue/Smithfield Road.

2.2.6 Croadalla Avenue provides north/south connections from Chaucer Avenue and Smithfield Road to Southey Walk and Park View. Croadalla Avenue is a 7-metre-wide single carriageway road with 2-metre-wide footways and street lighting provided along both sides of the carriageway. Croadalla Avenue is residential in nature with residential dwellings located along both sides of the carriageway and is subject to a 30-mph speed restriction.

2.2.7 At its northern end Croadalla Avenue rounds a bend and becomes Smithfield Road. From this point Smithfield Road continues in an east-west alignment and provides connections to an extensive residential area, before being renamed Howbank Road and ultimately providing connections to the A595.

2.2.8 At its southern end, Croadalla Avenue forms priority-controlled junctions with St Bridgett's Lane to the east and Southey Avenue to the west, before being renamed Park View. Park View then provides access to further residential areas before terminating at a priority-controlled junction with Grove Road. Grove Road then provides access towards Egremont town centre to the east and towards St Bees to the west.

2.2.9 Baybarrow Road borders the How Bank Farm site. It provides a circa 7 metre carriageway and is subject to a 30-mph speed limit. To the west of the site Baybarrow Road provides access to residential areas, before terminating at a priority junction with Ashlea Road. Ashlea Road then connects with Grove Road to the south.

2.2.10 To the east of the How Bank Farm site Baybarrow Road firstly forms a priority-controlled junction with Goldsmith Road, which provides a further route to Grove Road, before being renamed Southey Avenue. Southey Avenue then terminates at the aforementioned junction with Croadalla Avenue.

2.2.11 From this junction connections are then provided to St Bridgett's Avenue. This residential road extends to the east, before rounding a bend at which point it is renamed Nelson Square. Nelson Square then forms a roundabout junction with Central Avenue and Tower View from which connections are available to Castle Villas. Castle Villas connects to Queens Drive to the south while to the north it leads into Egremont town centre and Main Street.

2.2.12 Main Street provides access to the majority of retail premises, general amenities, and food/drink establishments within Egremont. There are a range of retail establishments and services including food retail, general retail, pharmacy, and post office along with food and drink venue.

2.2.13 From the Castle Villas junction, the northern Main Street arm provides connections to Whitehaven and Workington via the A595, while to the south Main Street connects with 72 and then Vale View, which provide an alternative route to the A595 and to Sellafield to the south.

2.3 Pedestrian Accessibility

2.3.1 The Institution of Highways and Transportation (IHT) document 'Guidelines for Providing for Journeys on Foot' (2000) contains suggested acceptable walking distances for pedestrians without mobility impairment for some common facilities. The guidelines suggest that an acceptable walking distance for commuting/school purposes is 1 kilometre, with a preferred maximum distance of 2 kilometres. Walking can also be promoted as part of a multi-modal journey, particularly with public transport.

2.3.2 The more recent CIHT document 'Planning for Walking' (2015) affirms this by stating that 80% of journeys shorter than a mile (approximately 1.6 kilometres) are made wholly on foot.

2.3.3 An analysis of the pedestrian catchment of the site has been completed to illustrate the site's 2-kilometre walking catchment which represents a journey of approximately 25 minutes. This is defined as a preferred maximum for trips carried out on foot by the Chartered Institution of Highways and Transportation (CIHT) document, entitled 'Guidelines for Providing for Journeys on Foot'.

2.3.4 The pedestrian catchment plan for the sites is shown on **Plan 4**, with the How Bank Farm site catchment in yellow and the Orgill School site catchment in blue. This demonstrates that the majority of Egremont, including the whole of the town centre is within the pedestrian catchment of the two sites.

2.3.5 Within Egremont town centre Main Street provides a wide range of day-to-day amenities including a supermarket, post office, cash machine, GP surgery, pharmacy, and dentist. The location of the key local facilities is shown in **Plan 5**. This plan also highlights the location of a number of amenities on Southey Avenue which are in closer proximity to the sites. These include a primary school, convenience store and take-away, which are approximately 250 metres from both sites.

2.3.6 In addition to these retail and civic amenities, there are industrial and employment land uses on the outskirts of the town which provide further employment opportunities to those provided in the town centre.

2.3.7 To support pedestrian trips street lit footways are provided along all roads in the vicinity of the sites. These are supported by dropped kerbs and tactile paving on the key pedestrian desire lines. A hard surfaced, street lit, public footpath is also located along the southern boundary of the How Bank Farm site and along the western boundary of the Orgill School site.

2.3.8 This pedestrian infrastructure provides safe connections from the sites to the surrounding education establishments and retail amenities, as well as connections to Egremont town centre. Within the centre of Egremont wide street lit footways are provided along both sides of Main Street, with signalised pedestrian crossing facilities also provided.

2.3.9 It is therefore concluded that the pedestrian facilities in the vicinity of the sites provide an excellent opportunity for trips to be undertaken on foot, with a number of local amenities conveniently located.

2.4 Accessibility by Cycle

2.4.1 Cycling is becoming an increasingly popular mode of transport and is an effective mode for short trips. The DfT's Local Transport Note 2/08 'Cycle Infrastructure Design' (2008) states that many utility cycle journeys are under 3 miles (approximately 5 kilometres) although for commuters a trip distance of over 5 miles is not uncommon.

2.4.2 Consequently, cycling has the potential to replace short car journeys, particularly those under 5 kilometres. At a leisurely cycle speed of 10 miles per hour this would equate to a journey of around 25 minutes.

2.4.3 **Plan 6** highlights a 5-kilometre cycle catchment from the sites along with all cycling facilities/infrastructure within the surrounding area. This would equate to a journey of around 25 minutes using a leisurely cycle speed of 12 kilometres per hour.

2.4.4 The 5-kilometre cycle catchment covers the whole of Egremont, in addition to a number of villages in the surrounding area, including Thornhill, Bigrigg and Cleator, along with St Bees. The significant employment site of Sellafield is approximately 7.5 kilometres from the site which is not an unreasonable cycle journey from Egremont.

2.4.5 To support trips by bicycle National cycle route 72 runs through the centre of Egremont. This route provides a connected on-road and traffic free cycle route running from Kendal along the Cumbrian coast to Barrow-in-Furness, Whitehaven and Silloth.

2.4.6 The site is therefore concluded to be accessible by bicycle.

2.5 Accessibility by Public Transport

Access by Bus

2.5.1 The closest bus stops to the site are located on Egremont Bypass and Main Street as shown on **Plan 4**. These stops are approximately 600 metres walking distance from the Orgill School site, and around 900 metres walking distance from How Bank Farm site.

2.5.2 While these walking distance is slightly further than typically desirable, the potential for residents to consider these bus services as a viable travel option does reflect recent NPPF guidance, which at Paragraph 103 states that "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".

2.5.3 On the basis of this guidance, the bus stops on are considered accessible from the proposed development sites.

2.5.4 **Table 4.1** provides a summary of the bus services and frequencies that operate along Main Street and Egremont Bypass.

Service	Route	Monday - Friday				Sat	Sun
		AM Peak	Daytime	PM Peak	Evening		
30	Maryport - Whitehaven - Egremont - Thornhill	2	2	2	1	2	1
X30	Whitehaven - Egremont	-	1	-	-	1	-

Table 4.1: Bus Services to/from Egremont

2.5.5 As can be seen from **Table 4.1**, the route 30 provides a service to key destinations such as Whitehaven and Workington throughout the day at weekends.

2.5.6 In addition to public bus services, there are also some dedicated services operated for employees of the Sellafield site, which is a significant local employer. Services include the following:

- A shuttle service from the company's Whitehaven offices and the Sellafield site, via Egremont. This runs every 15 minutes between 8am and 4pm, with very limited services before and after

these times. This service stops at the car park on Chapel Street in the centre of Egremont town centre.

- A park and ride service from the Moresby Parks park and ride (to the east of Whitehaven), via Cleator Moor and Egremont to the Sellafield site. This provides 9 services between 06:15 and 09:15 in the morning and 11 return services between 11:15 and 5:20pm.

2.5.7 The proposed development site is therefore concluded to be accessible by public transport.

Access by National Rail

2.5.8 As shown in **Plan 6,** St Bees National Railway Station is within a 5km cycle of the site. St Bees is managed by Northern Trains with a local stopping service operating between Barrow-In-Furness and Carlisle. Stops along this route include Millom, Sellafield, and Whitehaven. Services operate on an hourly frequency in both directions Monday to Sunday with earlier and later trains operating during the week and on Saturdays.

2.6 Summary

2.6.1 Overall, the review of the site has identified that it is in a sustainable location and therefore is ideally placed to be able to positively promote and encourage trips by walking, cycling or public transport, rather than being reliant on the private car. The site's sustainable location is enhanced by virtue of its proximity to a range of day-to-day amenities, including those located in Egremont town centre.

3 PROPOSED DEVELOPMENT

3.1.1 The planning application relates to the redevelopment of two sites in close proximity to each other. The land at How Bank Farm site lies approximately 150m to the south west of the former Orgil School site. The sites lie to the west of Egremont town centre and both are currently undeveloped.

3.1.2 The detailed planning application will cover both sites with the How Bank Farm site providing up to 97 dwellings and the Former Orgil School providing a further 17 dwellings. As such, the planning application will consider a total of 114 units. Access for the How Bank Farm site will be from Babybarrow Road with access for the Orgil School site taken from Chaucer Avenue and Croadalla Avenue.

3.1.3 The proposed site layout for both sites is shown in **Plan 3**.

3.2 Internal Site Layout

How Bank Farm

3.2.1 The proposed internal road network has been designed in accordance with Cumbria County Council's Development Design Guide. The internal access road provides a width of 5.5 metres, with 2 metre footways provided on each side of the carriageway.

3.2.2 The internal road network has been designed to encourage low vehicle speeds, thus creating a pedestrian and cycle friendly environment. The proposed layout features a short section of 'shared surface' for access to some of the properties in the centre of the site. These sections will be 4.8m wide.

Former Orgill School

3.2.3 The proposed internal road network has been designed in accordance with Cumbria County Council's Development Design Guide. The internal road network has been designed to encourage low vehicle speeds, thus creating a pedestrian and cycle friendly environment. The proposed layout features two short sections of 'shared surface' for access to the properties within the site.

3.3 Site Access Arrangements

3.3.1 Access to the How Bank Farm site is proposed from a priority-controlled junction with Baybarrow Road. This access will be designed to adoptable standards in line with Cumbria County Council's Development Design Guide. There will be 2-metre wide footways provided along all sides of the access junction and will provide connections to the existing pedestrian footways on Baybarrow Road/Southey Walk.

3.3.2 Vehicle access to the Former Orgill School site is proposed from multiple locations. Four dwellings will have driveways providing direct access onto Chaucer Avenue, five dwellings will be accessed off Chaucer Avenue by way of a shared surface street, three dwelling will have driveways providing direct access onto Croadalla Avenue and five dwellings will be accessed of Croadalla Avenue by way of a shared surface street. Connections will be made to the existing footways along Chaucer Avenue and Croadalla Avenue.

4 TRAVEL PLAN INTIATIVES

4.1 Plan Flexibility

4.1.1 To satisfy the objectives, a range of suggested initiatives are provided in this document. These are discussed in the following section and are intended to encourage travel by sustainable modes.

4.1.2 The promotion of walking, cycling and public transport trips will be a key aim of the Travel Plan and will sit alongside the measures to promote car sharing amongst future residents. As far as possible, the measures set out in this section are designed to be suitable for review and monitoring. The list is not exhaustive and additional measures may be added to the list in the future.

4.1.3 It is important for the Travel Plan to be flexible to changing circumstances and innovations. Once it has been implemented, the Travel Plan Co-ordinator will be encouraged to investigate and adopt other potential initiatives to increase the attractiveness of making journeys to/from the site by non-car modes where appropriate.

4.2 Provision of Information

4.2.1 The dissemination of information relating to sustainable travel modes will be an important part of the Plan. Future residents are unlikely to be aware of the full opportunities available for using sustainable transport modes as they may not be familiar with the local area.

4.2.2 Information in relation to sustainable transport opportunities may be disseminated in the following ways:

- Inclusion of information, in relation to the available sustainable transport opportunities, within an initial Information Sheet;
- Provision of 'Travel Packs' to all residents. The pack would include walk and cycle maps, showing integration with local amenities and public transport, and details of local public transport services, including maps and timetables. The pack might also contain the first travel questionnaire/diary and note the overall objectives to raise awareness of the proposals; and
- Use made of existing and emerging technologies (i.e. mobile phone applications, real time public transport information systems) where appropriate.

4.3 Travel Pack

4.3.1 The Travel Plan may be marketed and promoted through the provision of the Travel Pack for new residents. In addition to this, the Travel Plan Co-ordinator may also investigate the potential for providing community web pages, which may be hosted through an existing or new website. This could be used to develop a car sharing database for future residents, to disseminate information, such as forthcoming national events (e.g. National Cycle to Work Week) and outline any available sustainable transport discounts. Further detail for specific modes is outlined below. **Figure 4.1** shows an example of the travel information guide developed by Gleeson Homes for their Carlisle Street site in Swinton.

Figure 4.1: Example Travel Information Guide

4.3.2 **Figure 4.2** provides an image of the website which was produced for Gleeson's Carlisle Park development. In this instance the website was also used to issue the residents travel survey.

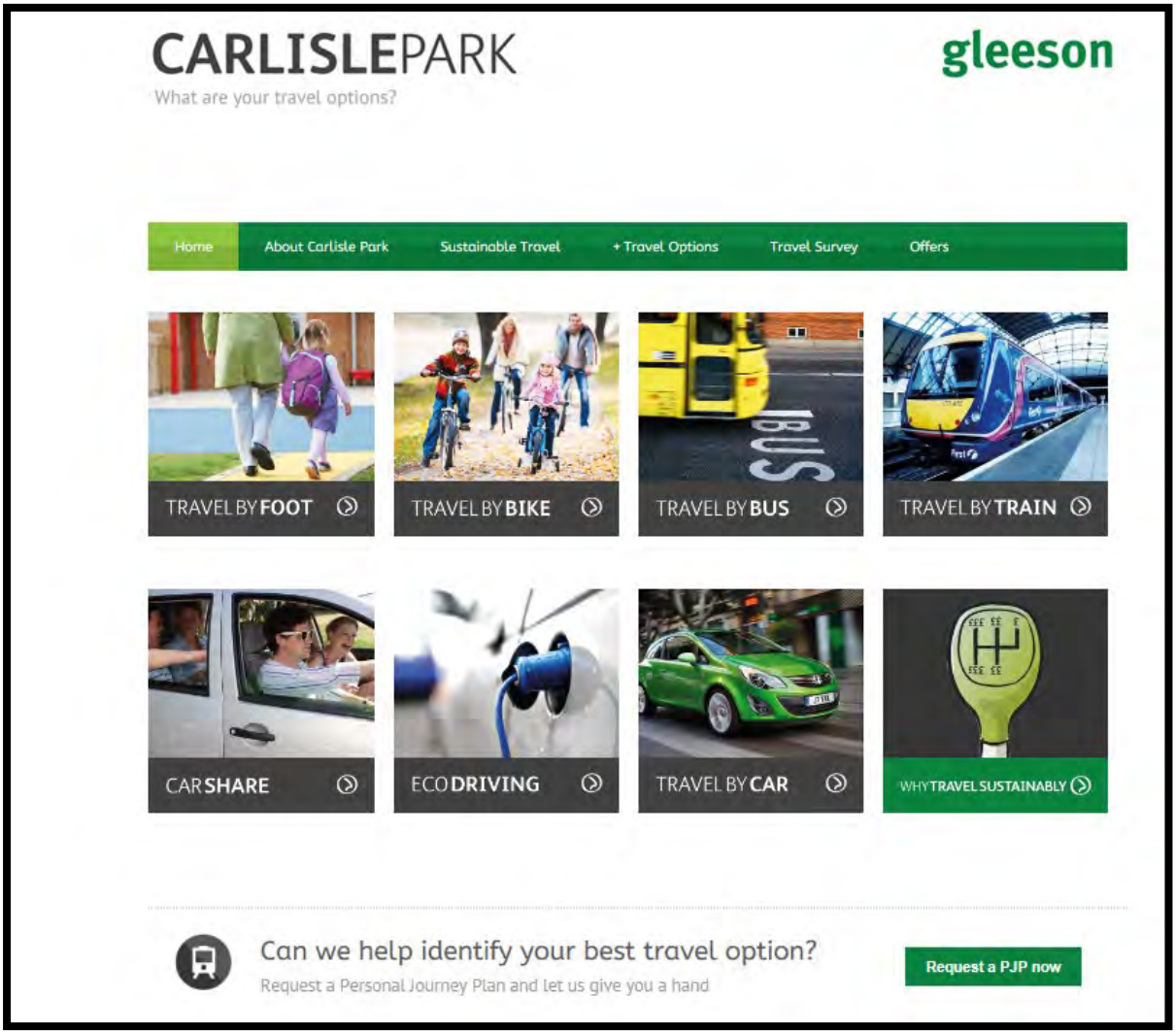


Figure 4.2: Website Promotion

4.4 Mode Specific Travel Information

Walking

4.4.1 Measures to encourage walking as part of a multi-modal journey may include:

- Travel Plan Co-ordinator liaison with the Highway Authority to ensure that potential pedestrian walking routes are appropriately maintained; and
- Residents informed of Active Travel through the use of information sheets (possibly made available on a community website or online forum).

4.4.2 **Figure 4.3** provides an image of the 'travel of foot' page of the website produced for Gleeson Homes' Carlisle Park development.

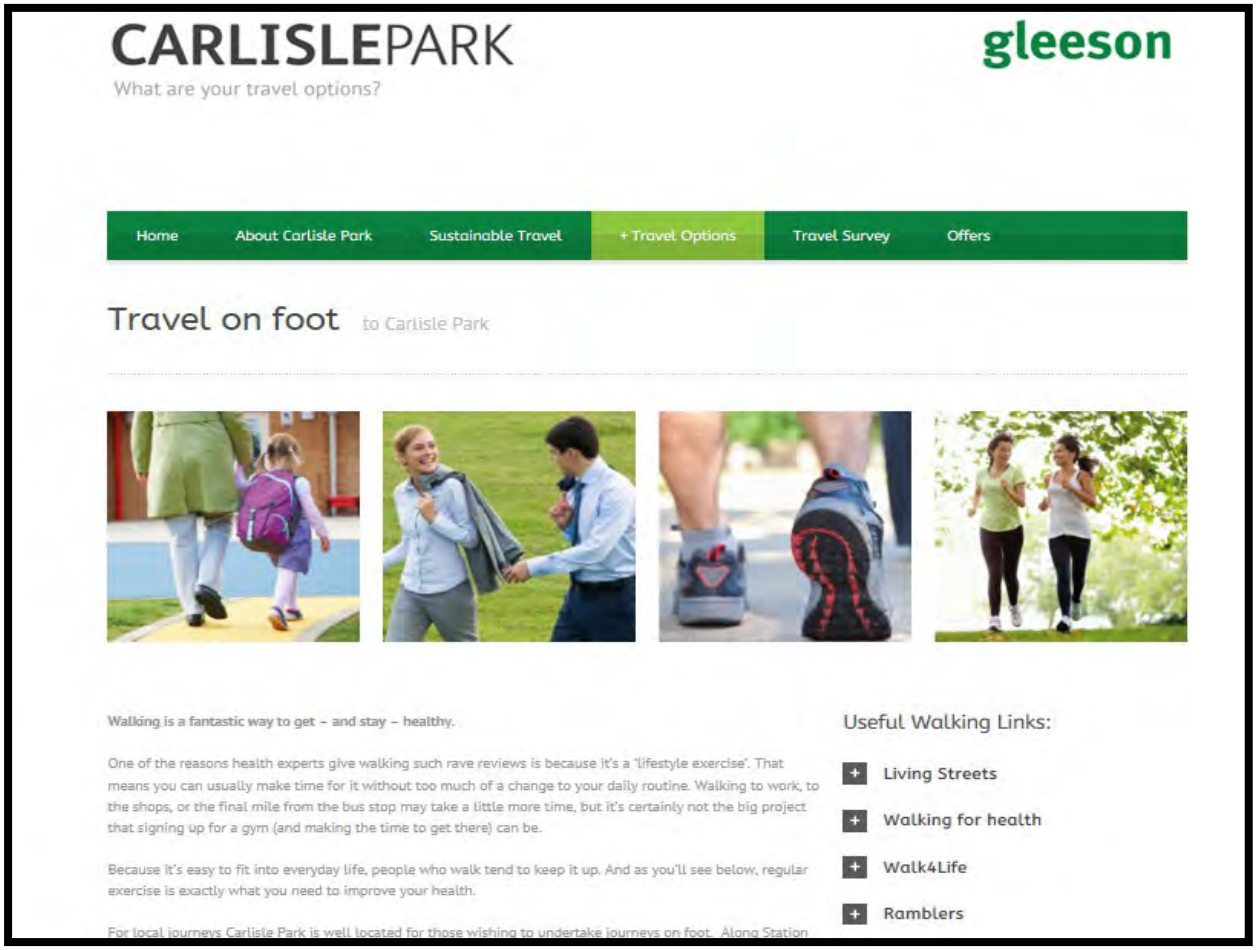


Figure 4.3 Walking Promotion Webpage

Cycling

4.4.3 Cycling is promoted with secure cycle parking provided within the development. Further measures to encourage cycling may include:

- Promotional material on bicycle maintenance to be available to residents (possibly via a community website);
- Practical advice, safety information and local route information can be promoted;
- Advertisement of a local bicycle user group to new residents;
- Special travel events could be promoted at the site (e.g. a Dr Bike style event);
- The Travel Plan Co-ordinator to liaise with the Highway Authority to ensure that cycle routes are appropriately maintained; and
- Option for partnership with local cycle store which may facilitate the provision of vouchers or discounts for residents.

4.4.4 The development Travel Plan website will also provide key cycle information and links, an example of which is shown in **Figure 4.4**.

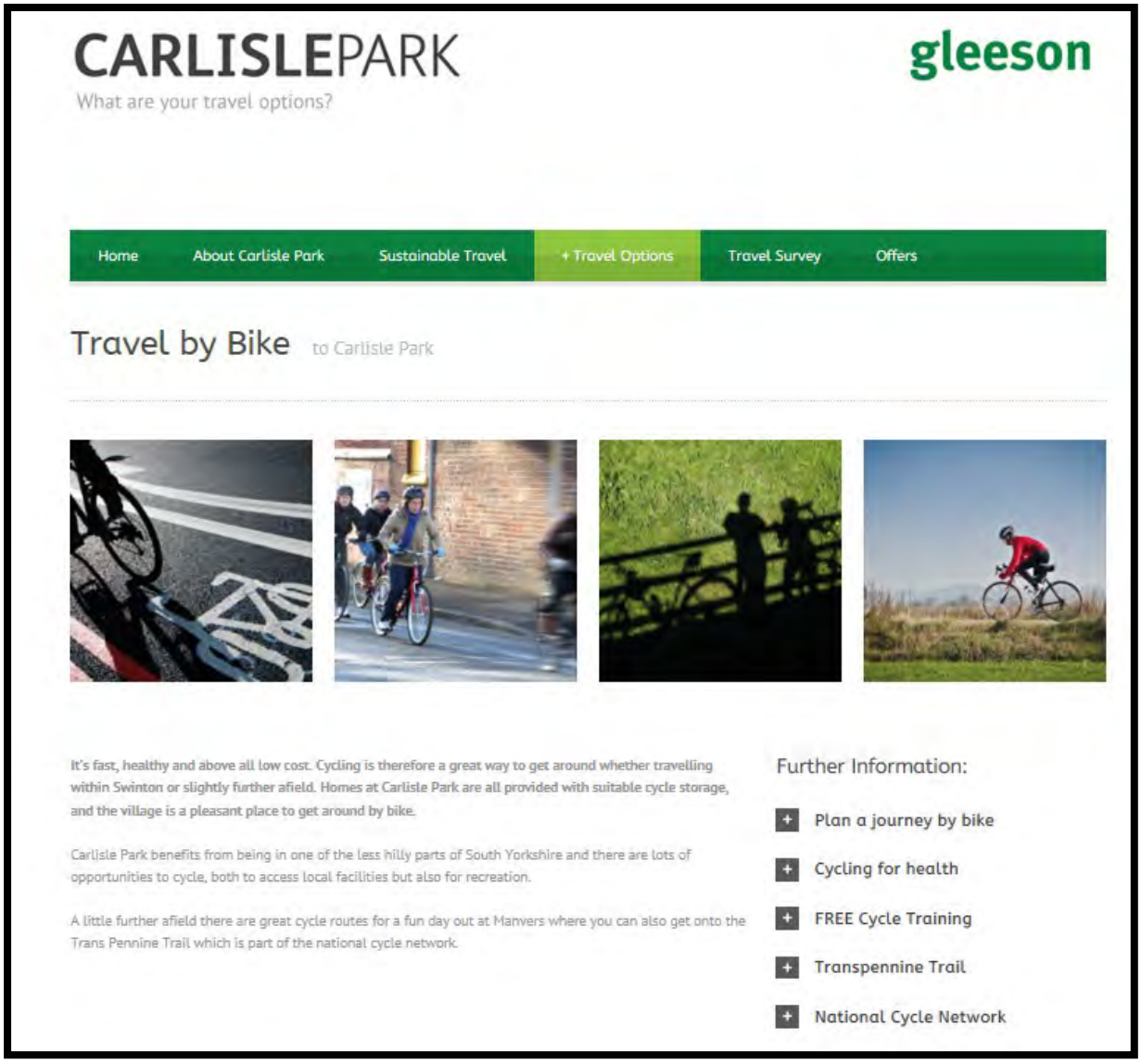


Figure 4.4: Cycling Promotion Webpage

Public Transport Services

4.4.5 As previously noted, there are a number of bus services available in the vicinity of the site. The use of public transport can be promoted as part of a multi-modal journey. Measures to encourage bus and train usage may include:

- Up to date information provided on bus and train services, including route information and service frequencies, available to residents;
- The Travel Plan Co-ordinator to liaise with the Local Authority and the public transport operators to ensure that information remains valid; and
- The Travel Plan Co-ordinator to bring to the bus and rail operators' attention any issues raised to ensure that the potential for the use of these services to the site is maximised.

4.4.6 The development Travel Plan website will also provide key public transport information and links, an example of which is shown in **Figure 4.5**.

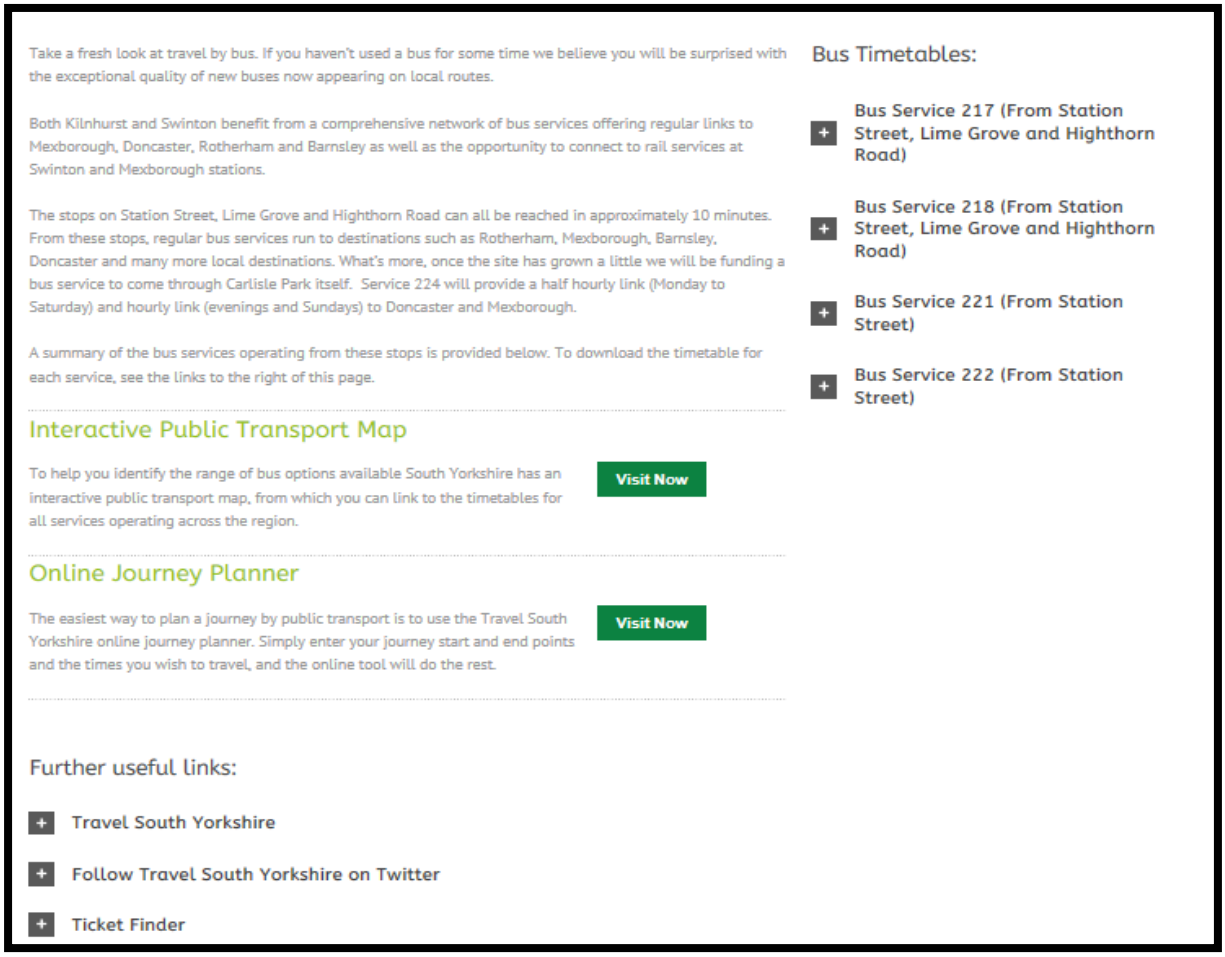


Figure 4.5: Public Transport Promotion Webpage (Bus page illustrated)

Car Sharing and Taxis

4.4.7 Given the location of the development a car sharing scheme could be proposed for residents administered using a local database or alternatively there may be opportunities to use an internet based scheme such as www.liftshare.com.

4.4.8 Taxis may allow residents to make trips by public transport and then access the site more easily, even if this is occasional. A list of local taxi company's contact details will be available within the Travel Pack.

5 ADMINISTRATION, MONITORING AND REVIEW

5.1 Administration

Management

5.1.1 The administration of the Travel Plan will initially be the responsibility of a Travel Plan Co-ordinator. A dedicated Travel Plan Co-ordinator will be appointed to provide residents with details of the environmental, social and health benefits to be gained by using sustainable transport modes and will be the first point of contact for residents and other outside organisations in all matters regarding travel.

5.1.2 This post will run for the lifetime of the Plan which is typically 5 years with duties of the Travel Plan Coordinator generally including:

- The operation of the Plan;
- Maintenance of a database containing existing travel information;
- Monitoring of the Travel Plan;
- The preparation of subsequent update Travel Plan reports for submission to the Local Authority;
- Liaison with the Local Authority Travel Plan Co-ordinator (where appropriate);
- Liaison with Public Transport providers (where appropriate);
- Promotion of the Travel Plan; and
- Promotion of travel events.

Funding

5.1.3 Financial measures will be considered at an appropriate time along with a suitable budget to be set aside for the Travel Plan and its initiatives as required. At this stage, it is envisaged that this would allow travel taster initiatives to be promoted such as a weekly bus/rail ticket, membership to the car club scheme and cycle accessories. The Action Plan for the implementation of the Travel Plan and its suggested initiatives is discussed in subsequent sections of this document.

5.2 Monitoring

5.2.1 The Travel Plan is a strategy which can evolve over time. It is important that the Plan is a flexible document that is responsive to change, although the underlying objectives of the Plan, which are to educate and facilitate travel by sustainable modes, will not change.

Baseline

5.2.2 Travel surveys will be conducted to determine the baseline from which the effectiveness of the Travel Plan may be evaluated. These could be supplemented by a questionnaire survey or travel diary for residents. It is envisaged that the first questionnaire surveys/travel diaries may be issued to residents as part of the Travel Pack. Within 6 months of first occupation, the returned survey data will be collated and analysed which may then form the baseline upon which to set targets and monitor progress.

5.2.3 To assist in collecting travel survey data from residents, it could be advertised that each returned completed questionnaire is entered into a prize draw; the winner receiving a prize, which may be vouchers for a local cycle shop or similar.

5.2.4 The surveys should be repeated on an annual basis for a 5-year period. The programme of monitoring and review will be designed to generate information by which the success of the Plan can be evaluated. Monitoring and review will be the responsibility of the Travel Plan Coordinator.

Targets

5.2.5 Following the establishment of the baseline, a full Travel Plan for the site will be produced which will include targets (to be agreed with the Local Authority).

5.2.6 It is envisaged that targets may be set for the percentage of trips by sustainable modes over a 5-year period. It may be possible to increase the number of walking and cycling trips by a percentage (to be agreed) over a 5-year period to assist with general health and wellbeing.

5.3 Review

5.3.1 The first review will be 12 months after completion of the full Travel Plan and may include production of a brief Travel Plan review report. This may be submitted to the Local Authority for information.

5.3.2 After the initial review, a further update may be carried out annually, which would include the submission of a summary report to the Local Authority. This should continue for a period of 5 years. The review of the Plan might include:

- Analysis of the latest travel survey responses;
- The latest bus, cycle, and walking route information;
- Consideration of any subsequent development or new transport provision in the local area and its implications for the Plan;
- Review of targets for the future year;
- Any additional measures, any changes/refinements to existing measures; and
- Evaluation of the success of the various measures implemented to date.

6 DRAFT ACTION PLAN

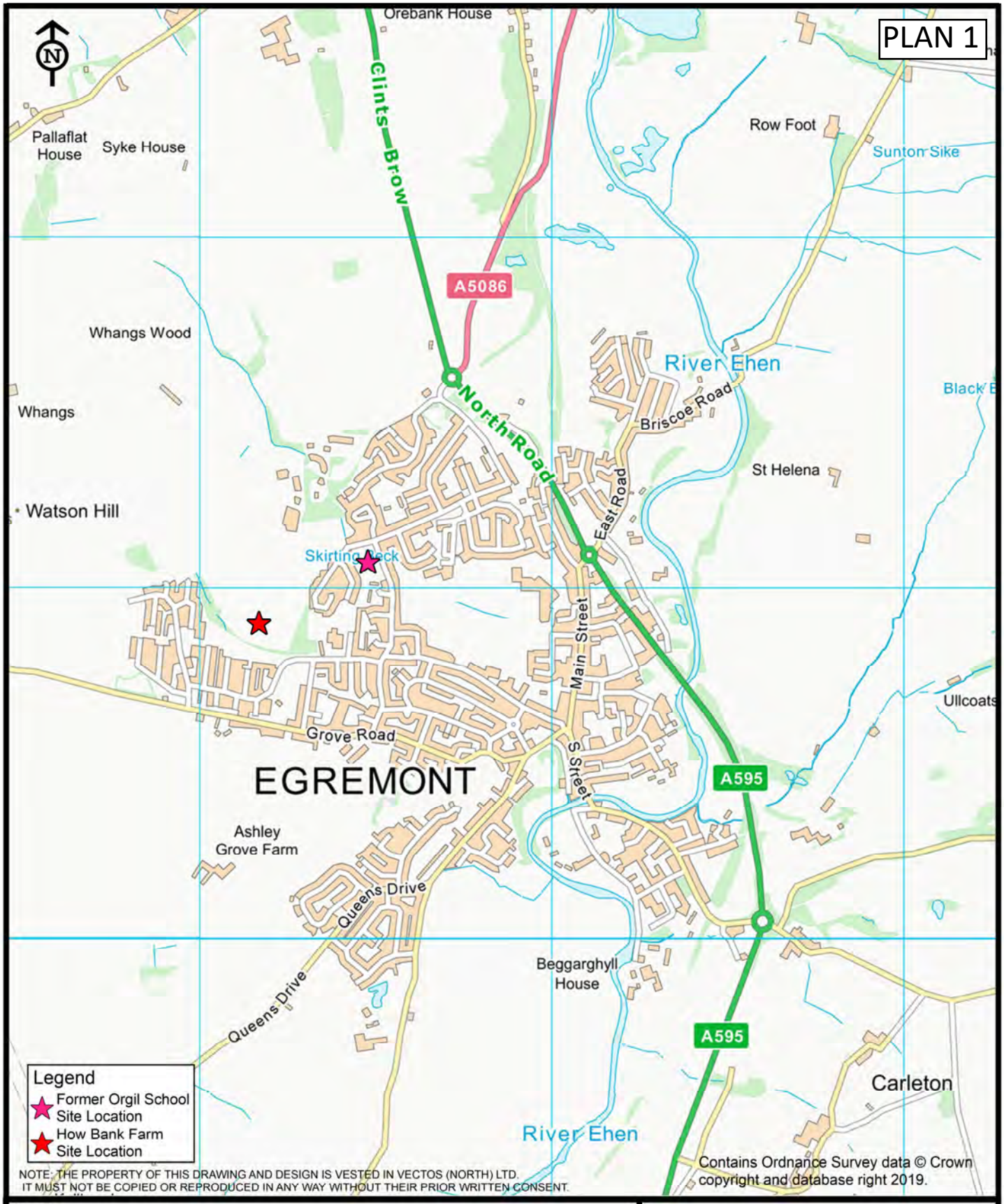
6.1.1 The following list describes the proposed measures that are to be taken to help achieve the Travel Plan objectives. The measures can be developed in the form of an Action Plan as outlined overleaf. The Action Plan should:

- Include a time frame for each action so as to provide a clear approach for the implementation of the Travel Plan;
- Name the person who is to be responsible for making sure the actions are accomplished; and
- Include a range of measures of varying degrees of complexity. It is important to ensure that all measures are attempted and that not just the easiest measures are achieved.

Measure	Objective	Responsibility	Deadline
Framework Travel Plan	Prepare Framework Travel Plan	Vectos	Prior to Planning permission
Appoint TPC	Provide person responsible for Plan	Gleeson Homes	Prior to first occupation
Set up development website	Provide person responsible for Plan	Gleeson Homes	Prior to first occupation
Provide all new residents with travel information guide	Promotion of sustainable travel	TPC	Prior to first occupation
Provide community notice board	Promotion of sustainable travel	Gleeson Homes	During construction
Provide pedestrian infrastructure	Promote walking	Gleeson Homes	During construction
Submit and agree Full Travel Plan	Promotion of sustainable travel	TPC	Prior to first occupation
Investigate potential for school walking initiatives	Promotion of sustainable travel	TPC	From first occupation
Carry out baseline travel survey	Determine baseline travel patterns	TPC	Once occupation exceeds 50 units
Commission follow up travel survey	Monitor Travel Plan progress towards targets	TPC	12 months after baseline survey (and then annually)
Prepare residents newsletter	Promotion of sustainable travel	TPC	Annually until full occupation
Produce Annual Progress Report for CCC	Tailor Travel Plan to site conditions and progress towards targets	TPC	1 month after first survey and annually thereafter

PLANS

PLAN 1



CLIENT:
Gleeson Homes

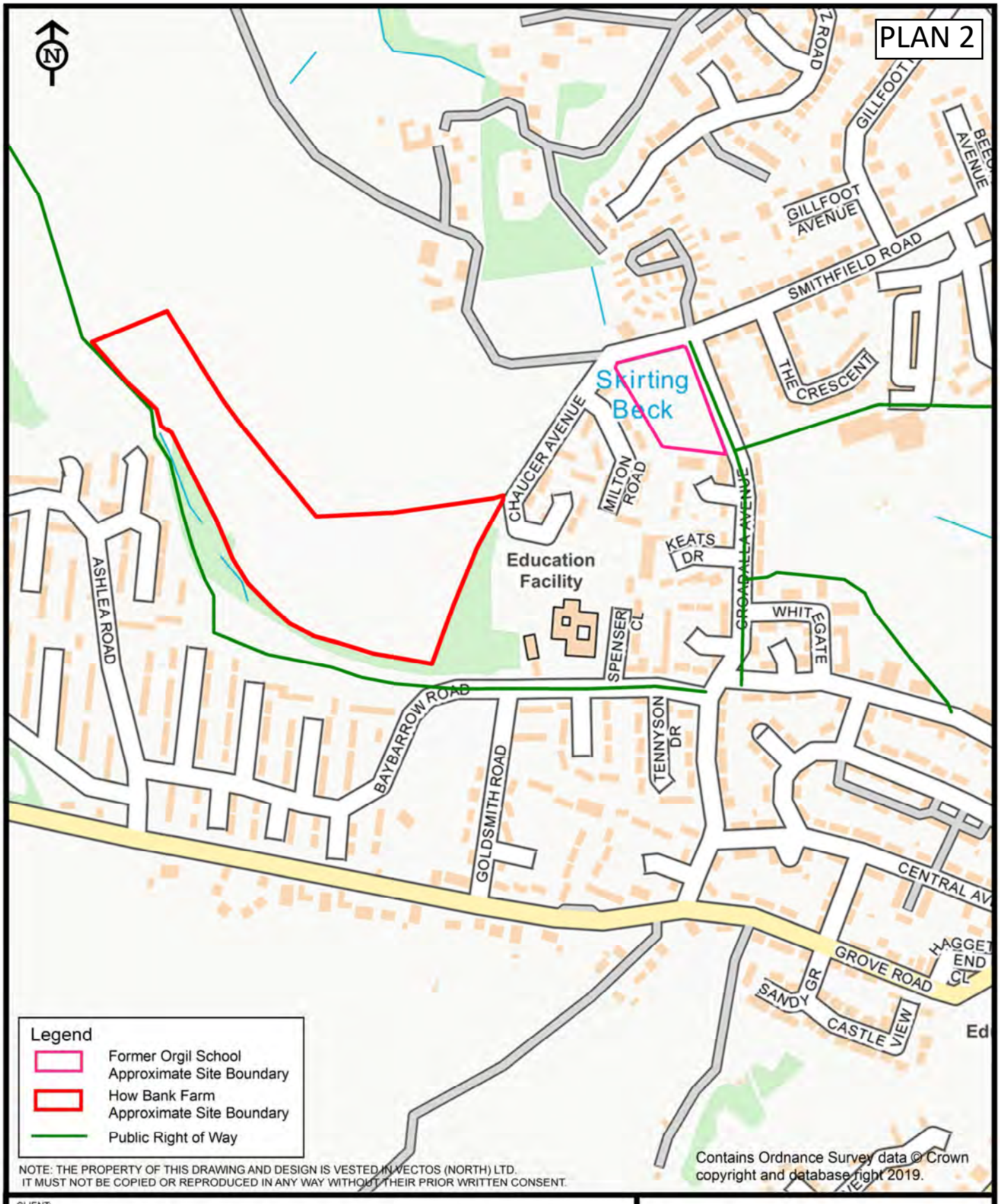
PROJECT TITLE:
Land at How Bank Farm and Former Orgill School, Egremont

DRAWING TITLE:
Site Location - Wider Context

vectos transport planning specialists
Oxford Place, 61 Oxford Street, Manchester M1 6EQ
t:0161 228 1008 e:manchester@vectos.co.uk

DRAWN:	CHECKED:	DATE	SCALE:	DRAWING NO:	REVISION:
TA	RW	Sep. 2020	1:15,000 at A4	VN201725-G100	.

PLAN 2



CLIENT:
Gleeson Homes

PROJECT TITLE:
Land at How Bank Farm and Former Orgill School, Egremont

DRAWING TITLE:
Site Location - Local Context

vectos transport planning specialists

Oxford Place, 61 Oxford Street, Manchester M1 6EQ
t:0161 228 1008 e:manchester@vectos.co.uk

DRAWN:	CHECKED:	DATE	SCALE:	DRAWING NO:	REVISION:
TA	RW	Sep. 2020	1:5,000 at A4	VN201725-G101	.

FORMER ORGILL INFANTS SCHOOL, EGREMONT

KEY

- 1.8m HIGH TIMBER SCREEN FENCE TO SEPARATE DETAIL
- 1.8m HIGH TIMBER SCREEN DIVISIONAL FENCE TO SEPARATE DETAIL
- 1.8m HIGH SCREEN WALL TO SEPARATE DETAIL
- PROPOSED TREE PLANTING
- EXISTING TREES TO BE REMOVED
- SHARED DRIVE
- AS / OPP — 'AS' AND 'OPP' HANDINGS OF HOUSE TYPES

SCHEDULE OF ACCOMMODATION - HOW BANK FARM

TYPE	NAME	DESCRIPTION	SQ.FT	No.
211	Boston	2 bed semi-det.	651	11
301	Tyrone	3 bed semi-det.	759	20
303	Wicklow	3 bed semi-det.	772	4
310s	Woodford	3 bed semi-det.	788	7
304	Killkenny	3 bed detached	772	12
354	-	3 bed detached	904	13
358	-	3 bed detached	984	8
401	Longford	4 bed detached	1066	6
403	Carlow	4 bed detached	1048	4
435	Dublin	4 bed detached	1172	12
TOTAL			**84,485 SQ.FT**	**97No.**

SCHEDULE OF ACCOMMODATION - FORMER ORGILL INFANTS SCHOOL

TYPE	NAME	DESCRIPTION	SQ.FT	No.
301	Tyrone	3 bed semi-det.	759	7
310s	Woodford	3 bed semi-det.	788	3
313	-	3 bed semi-det	772	2
304	Killkenny	3 bed detached	772	3
314	-	3 bed detached	772	2
TOTAL			**13,081 SQ.FT**	**17No.**

REV	DESCRIPTION	DATE
A	ACCESS AMENDED TO HOW BANK FARM; TOPO INFO ADDED TO ORGILL SCHOOL.	06.10.20

GLEESON HOMES & REGENERATION

DRAWING
PLANNING LAYOUT

PROJECT
HOW BANK FARM & FORMER ORGILL INFANTS SCHOOL, EGREMONT

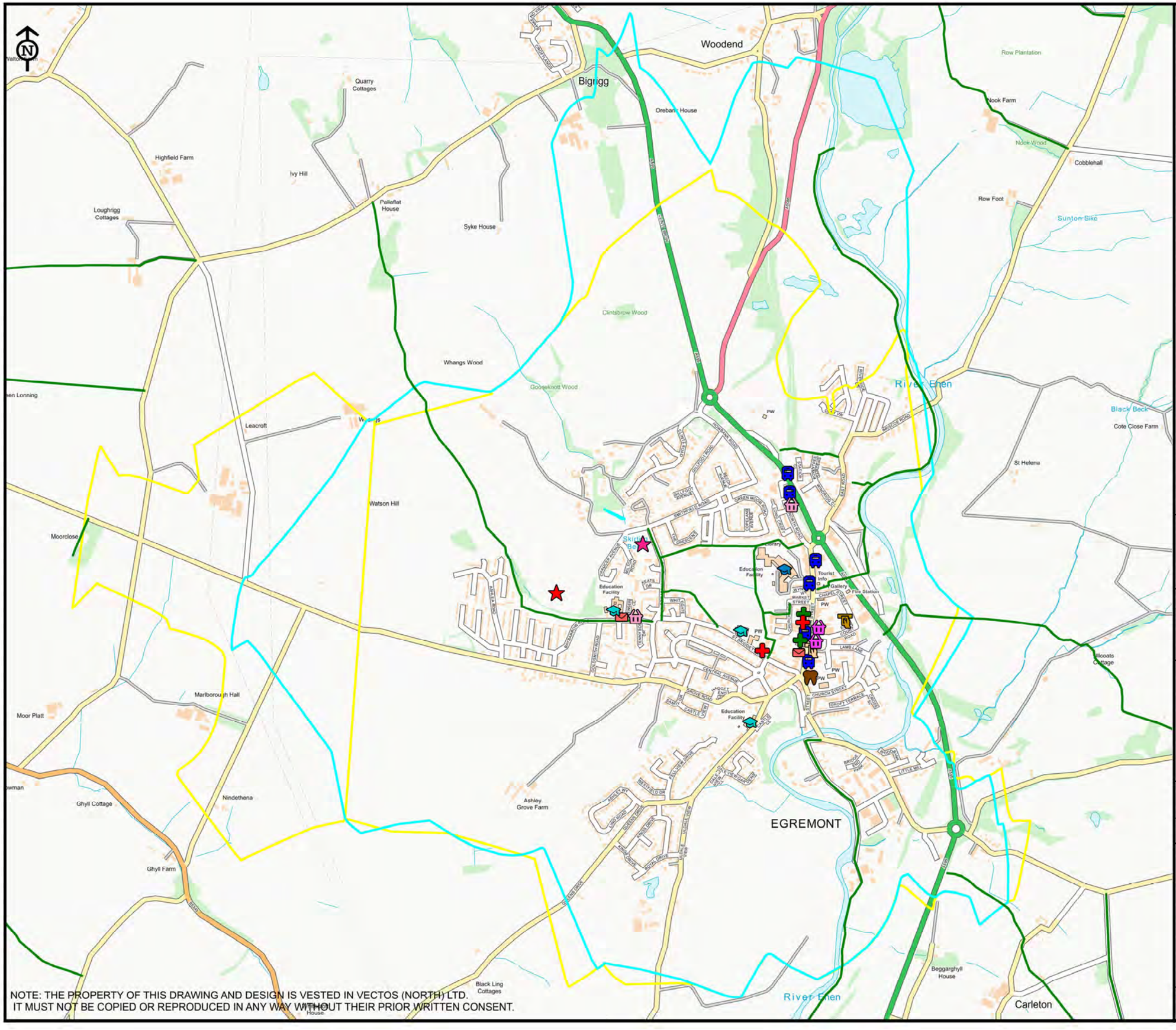
SCALE	1:500@A0	REV.	A
DATE	SEP 2020		
DRAWN	TWENTY10		

DRAWING No. MJG/PL-111

TWENTY10 DESIGN AND PLANNING
Twenty10 Management Limited, 62 Hawkshead Avenue, Euxton, Chorley , Lancashire . PR7 6TE
Tel: (01257) 277 100 Email: info@twenty10.biz Fax: (01257) 268 911

HOW BANK FARM, EGREMONT

PLAN 4



Legend

- Former Orgil School SIte Location
- How Bank Farm Site Location
- Bus Stop
- Primary School
- Secondary School
- GP Surgery
- Dentist
- Newsagent/Post Office
- Convience Store
- Supermarket
- Pharmacy
- Mobile Bank
- Cash Machine/ATM
- Public Right of Way
- Former Orgill School 2km Walking Catchment
- How Bank Farm 2km Walking Catchment

This is not a construction drawing and is intended for illustrative purposes only.

CLIENT:

Gleeson Homes

PROJECT TITLE:

Land at How Bank Farm and Former Orgill School, Egremont

DRAWING TITLE:

Pedestrian Walking Catchment

SCALE: N.T.S

DRAWN:	CHECKED:	DATE:
TA	RW	Sep. 2020

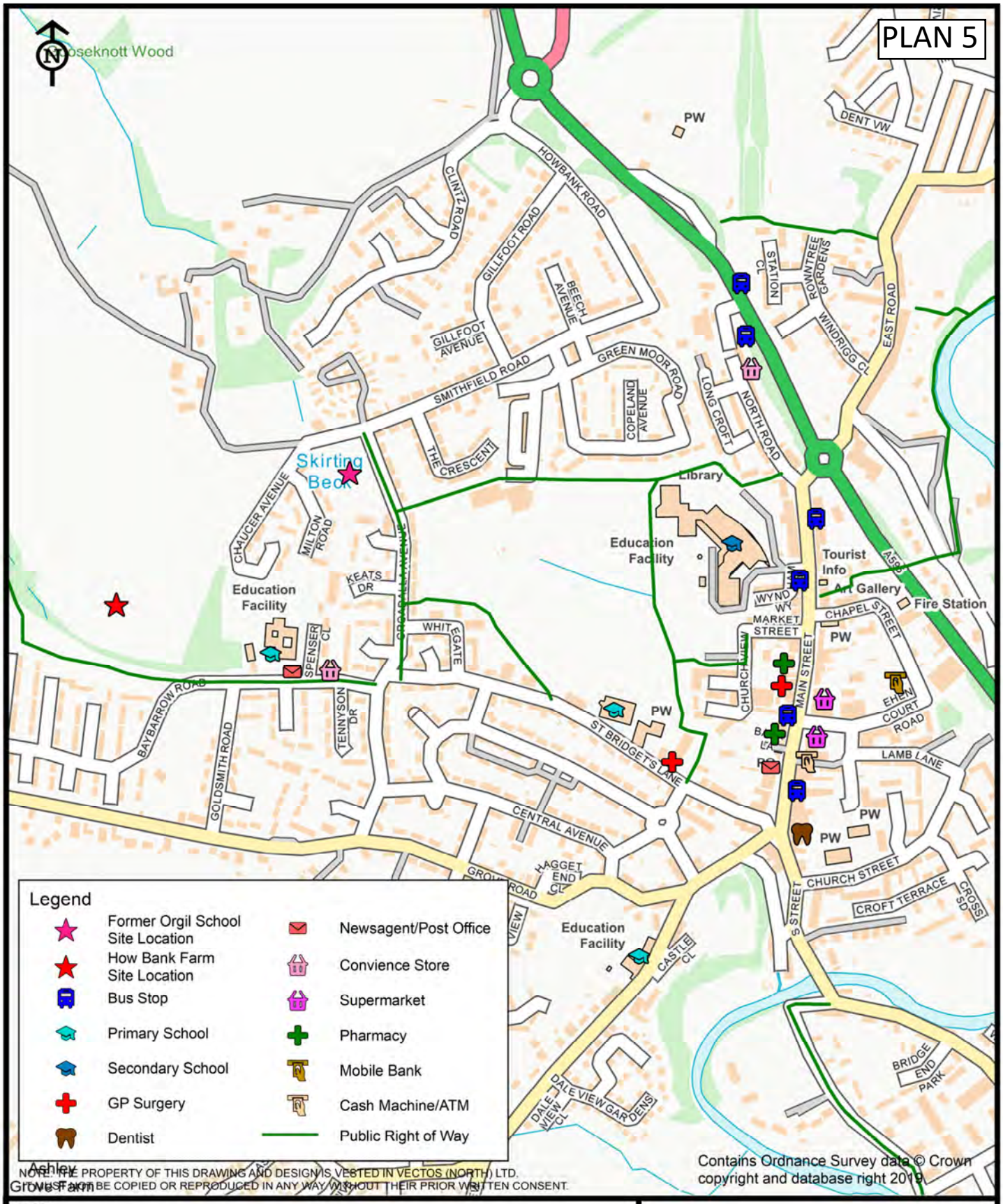
vectos transport planning specialists

Oxford Place, 61 Oxford Street, Manchester M1 6EQ
t:0161 228 1008 e:manchester@vectos.co.uk

DRAWING NO: VN201725-G103

REVISION:

PLAN 5



CLIENT:
Gleeson Homes

PROJECT TITLE:
Land at How Bank Farm and Former Orgill School, Egremont

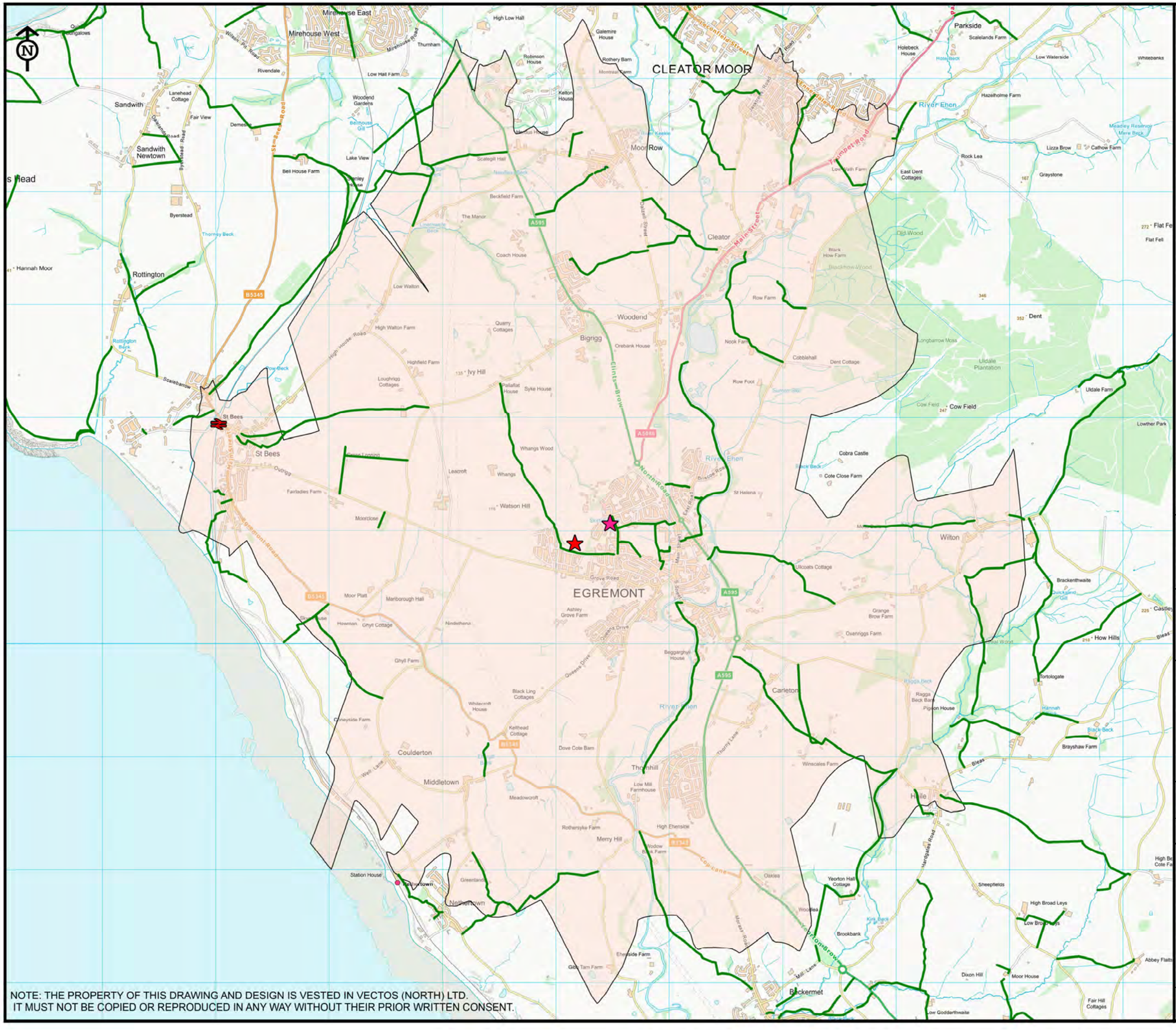
DRAWING TITLE:
Site Location - Local Amenities

vectos
transport planning specialists

Oxford Place, 61 Oxford Street, Manchester M1 6EQ
t:0161 228 1008 e:manchester@vectos.co.uk

DRAWN:	CHECKED:	DATE	SCALE:	DRAWING NO:	REVISION:
TA	RW	Sep. 2020	N.T.S	VN201725-G102	.

PLAN 6



Legend

- Former Orgil School Site Location
- How Bank Farm Site Location
- Railway Station
- Public Right of Way

Cycling Catchment

- 0 - 5km

This is not a construction drawing and is intended for illustrative purposes only.

CLIENT:
Gleeson Homes

PROJECT TITLE:
Land at How Bank Farm and Former Orgill School, Egremont

DRAWING TITLE:
Cycling Catchment

SCALE:
N.T.S

DRAWN:	CHECKED:	DATE:
TA	RW	Sep. 2020

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Oxford Place, 61 Oxford Street, Manchester M1 6EQ
t:0161 228 1008 e:manchester@vectos.co.uk

DRAWING NO: VN201725-G105

REVISION:

APPENDIX B

TRICS Output Files

Calculation Reference: AUDIT-715001-200907-0914

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

02	SOUTH EAST		
	HF	HERTFORDSHIRE	1 days
	KC	KENT	1 days
04	EAST ANGLIA		
	NF	NORFOLK	3 days
06	WEST MIDLANDS		
	SH	SHROPSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE		
	NY	NORTH YORKSHIRE	1 days
08	NORTH WEST		
	CH	CHESHIRE	2 days
10	WALES		
	PS	POWYS	1 days

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

Primary Filtering selection:

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

Parameter: No of Dwellings
Actual Range: 23 to 288 (units:)
Range Selected by User: 6 to 200 (units:)

Parking Spaces Range: All Surveys Included

Parking Spaces per Dwelling Range: All Surveys Included

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/12 to 19/11/19

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

Selected survey days:

Monday	2 days
Tuesday	2 days
Wednesday	3 days
Thursday	3 days

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

Selected survey types:

Manual count	10 days
Directional ATC Count	0 days

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

Selected Locations:

Suburban Area (PPS6 Out of Centre)	3
Edge of Town	7

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

Selected Location Sub Categories:

Residential Zone	10

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

Secondary Filtering selection:

Use Class:

C3	10 days

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

Population within 1 mile:

1,001 to 5,000	2 days
5,001 to 10,000	8 days

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

Population within 5 miles:

5,001 to 25,000	4 days
25,001 to 50,000	2 days
50,001 to 75,000	4 days

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

Car ownership within 5 miles:

0.6 to 1.0	1 days
1.1 to 1.5	8 days
1.6 to 2.0	1 days

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

Travel Plan:

Yes	5 days
No	5 days

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

PTAL Rating:

No PTAL Present	10 days

This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1 CH-03-A-10 SEMI-DETACHED & TERRACED CHESHIRE
MEADOW DRIVE
NORTHWICH
BARNTON
Edge of Town
Residential Zone
Total No of Dwellings: 40
Survey date: TUESDAY *04/06/19* *Survey Type: MANUAL*

2 CH-03-A-11 TOWN HOUSES CHESHIRE
LONDON ROAD
NORTHWICH
LEFTWICH
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 24
Survey date: THURSDAY *06/06/19* *Survey Type: MANUAL*

3 HF-03-A-03 MIXED HOUSES HERTFORDSHIRE
HARE STREET ROAD
BUNTINGFORD

Edge of Town
Residential Zone
Total No of Dwellings: 160
Survey date: MONDAY *08/07/19* *Survey Type: MANUAL*

4 KC-03-A-07 MIXED HOUSES KENT
RECULVER ROAD
HERNE BAY

Edge of Town
Residential Zone
Total No of Dwellings: 288
Survey date: WEDNESDAY *27/09/17* *Survey Type: MANUAL*

5 NF-03-A-01 SEMI DET. & BUNGALOWS NORFOLK
YARMOUTH ROAD
CAISTER-ON-SEA

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 27
Survey date: TUESDAY *16/10/12* *Survey Type: MANUAL*

6 NF-03-A-04 MIXED HOUSES NORFOLK
NORTH WALSHAM ROAD
NORTH WALSHAM

Edge of Town
Residential Zone
Total No of Dwellings: 70
Survey date: WEDNESDAY *18/09/19* *Survey Type: MANUAL*

7 NF-03-A-05 MIXED HOUSES NORFOLK
HEATH DRIVE
HOLT

Edge of Town
Residential Zone
Total No of Dwellings: 40
Survey date: THURSDAY *19/09/19* *Survey Type: MANUAL*

8 NY-03-A-11 PRIVATE HOUSING NORTH YORKSHIRE
HORSEFAIR
BOROUGHBRIDGE

Edge of Town
Residential Zone
Total No of Dwellings: 23
Survey date: WEDNESDAY *18/09/13* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

9 PS-03-A-02 DETACHED/SEMI-DETACHED POWYS
GUNROG ROAD
WELSHPOOL

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 28
Survey date: MONDAY *11/05/15* *Survey Type: MANUAL*

10 SH-03-A-05 SEMI-DETACHED/TERRACED SHROPSHIRE
SANDCROFT
TELFORD
SUTTON HILL
Edge of Town
Residential Zone
Total No of Dwellings: 54
Survey date: THURSDAY *24/10/13* *Survey Type: MANUAL*

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

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
ES-03-A-04	Does not match development characteristics
HC-03-A-17	Does not match development characteristics
HC-03-A-18	Does not match development characteristics
HC-03-A-19	Does not match development characteristics
HC-03-A-20	Does not match development characteristics
HC-03-A-23	Does not match development characteristics

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

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	10	75	0.080	10	75	0.306	10	75	0.386
08:00 - 09:00	10	75	0.179	10	75	0.351	10	75	0.530
09:00 - 10:00	10	75	0.160	10	75	0.180	10	75	0.340
10:00 - 11:00	10	75	0.134	10	75	0.182	10	75	0.316
11:00 - 12:00	10	75	0.142	10	75	0.184	10	75	0.326
12:00 - 13:00	10	75	0.159	10	75	0.153	10	75	0.312
13:00 - 14:00	10	75	0.155	10	75	0.143	10	75	0.298
14:00 - 15:00	10	75	0.233	10	75	0.199	10	75	0.432
15:00 - 16:00	10	75	0.316	10	75	0.186	10	75	0.502
16:00 - 17:00	10	75	0.296	10	75	0.163	10	75	0.459
17:00 - 18:00	10	75	0.340	10	75	0.141	10	75	0.481
18:00 - 19:00	10	75	0.309	10	75	0.199	10	75	0.508
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.503			2.387			4.890

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

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

Parameter summary

Trip rate parameter range selected:	23 - 288 (units:)
Survey date date range:	01/01/12 - 19/11/19
Number of weekdays (Monday-Friday):	10
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	6

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

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

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	10	75	0.001	10	75	0.008	10	75	0.009
08:00 - 09:00	10	75	0.003	10	75	0.009	10	75	0.012
09:00 - 10:00	10	75	0.000	10	75	0.004	10	75	0.004
10:00 - 11:00	10	75	0.001	10	75	0.003	10	75	0.004
11:00 - 12:00	10	75	0.001	10	75	0.004	10	75	0.005
12:00 - 13:00	10	75	0.003	10	75	0.003	10	75	0.006
13:00 - 14:00	10	75	0.000	10	75	0.000	10	75	0.000
14:00 - 15:00	10	75	0.001	10	75	0.001	10	75	0.002
15:00 - 16:00	10	75	0.007	10	75	0.001	10	75	0.008
16:00 - 17:00	10	75	0.009	10	75	0.000	10	75	0.009
17:00 - 18:00	10	75	0.005	10	75	0.004	10	75	0.009
18:00 - 19:00	10	75	0.003	10	75	0.000	10	75	0.003
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.034			0.037			0.071

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

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

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

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	10	75	0.107	10	75	0.528	10	75	0.635
08:00 - 09:00	10	75	0.271	10	75	0.683	10	75	0.954
09:00 - 10:00	10	75	0.243	10	75	0.294	10	75	0.537
10:00 - 11:00	10	75	0.196	10	75	0.296	10	75	0.492
11:00 - 12:00	10	75	0.228	10	75	0.293	10	75	0.521
12:00 - 13:00	10	75	0.247	10	75	0.237	10	75	0.484
13:00 - 14:00	10	75	0.251	10	75	0.227	10	75	0.478
14:00 - 15:00	10	75	0.363	10	75	0.297	10	75	0.660
15:00 - 16:00	10	75	0.584	10	75	0.279	10	75	0.863
16:00 - 17:00	10	75	0.549	10	75	0.282	10	75	0.831
17:00 - 18:00	10	75	0.615	10	75	0.224	10	75	0.839
18:00 - 19:00	10	75	0.523	10	75	0.362	10	75	0.885
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			4.177			4.002			8.179

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

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

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

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	10	75	0.012	10	75	0.031	10	75	0.043
08:00 - 09:00	10	75	0.052	10	75	0.057	10	75	0.109
09:00 - 10:00	10	75	0.042	10	75	0.021	10	75	0.063
10:00 - 11:00	10	75	0.024	10	75	0.023	10	75	0.047
11:00 - 12:00	10	75	0.020	10	75	0.021	10	75	0.041
12:00 - 13:00	10	75	0.027	10	75	0.023	10	75	0.050
13:00 - 14:00	10	75	0.027	10	75	0.021	10	75	0.048
14:00 - 15:00	10	75	0.024	10	75	0.024	10	75	0.048
15:00 - 16:00	10	75	0.058	10	75	0.060	10	75	0.118
16:00 - 17:00	10	75	0.050	10	75	0.037	10	75	0.087
17:00 - 18:00	10	75	0.040	10	75	0.021	10	75	0.061
18:00 - 19:00	10	75	0.041	10	75	0.072	10	75	0.113
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.417			0.411			0.828

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

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

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

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	10	75	0.000	10	75	0.012	10	75	0.012
08:00 - 09:00	10	75	0.004	10	75	0.050	10	75	0.054
09:00 - 10:00	10	75	0.001	10	75	0.011	10	75	0.012
10:00 - 11:00	10	75	0.004	10	75	0.004	10	75	0.008
11:00 - 12:00	10	75	0.007	10	75	0.005	10	75	0.012
12:00 - 13:00	10	75	0.004	10	75	0.001	10	75	0.005
13:00 - 14:00	10	75	0.009	10	75	0.005	10	75	0.014
14:00 - 15:00	10	75	0.005	10	75	0.005	10	75	0.010
15:00 - 16:00	10	75	0.024	10	75	0.020	10	75	0.044
16:00 - 17:00	10	75	0.019	10	75	0.009	10	75	0.028
17:00 - 18:00	10	75	0.016	10	75	0.008	10	75	0.024
18:00 - 19:00	10	75	0.052	10	75	0.023	10	75	0.075
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.145			0.153			0.298

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

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

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

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	10	75	0.121	10	75	0.578	10	75	0.699
08:00 - 09:00	10	75	0.329	10	75	0.800	10	75	1.129
09:00 - 10:00	10	75	0.286	10	75	0.330	10	75	0.616
10:00 - 11:00	10	75	0.225	10	75	0.325	10	75	0.550
11:00 - 12:00	10	75	0.256	10	75	0.324	10	75	0.580
12:00 - 13:00	10	75	0.280	10	75	0.264	10	75	0.544
13:00 - 14:00	10	75	0.286	10	75	0.253	10	75	0.539
14:00 - 15:00	10	75	0.394	10	75	0.328	10	75	0.722
15:00 - 16:00	10	75	0.672	10	75	0.359	10	75	1.031
16:00 - 17:00	10	75	0.627	10	75	0.329	10	75	0.956
17:00 - 18:00	10	75	0.676	10	75	0.257	10	75	0.933
18:00 - 19:00	10	75	0.618	10	75	0.456	10	75	1.074
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			4.770			4.603			9.373

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

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

APPENDIX C

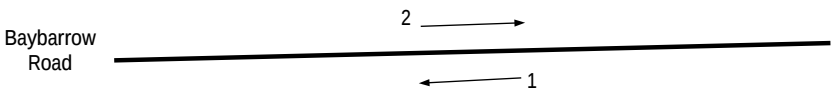
Baseline Traffic Survey Results

SURVEY CONTROL

Client:	Vectos North
Client Contact:	Richard Whiting
Survey Location:	Egremont
Date(s) of Survey:	Thursday 10th September 2020
Notes:	
On Site Supervisor:	Neil Harley
Data Checking:	David Cheng
Survey Reference:	2020 Egremont
Status:	Final
Date of Issue:	12th September 2020

N

JUNCTION 1



DRAWING TITLE: TRAFFIC MOVEMENT REFERENCE			
JOB TITLE: EGREMONT			
DRAWN BY: DC	DATE: 2029	SCALE: NTS	REF: FIGURE 1

signal surveys
Traffic Counts and Car Park Surveys
Parkway House, Palatine Road, Northenden, Manchester, M22 4DB
Tel 0161 998 4226

Time Beginning	Baybarrow Road - Thursday 10th September 2020					
	1			2		
	LV	HV	PCU	LV	HV	PCU
0730	2	0	2	10	0	10
0745	1	0	1	4	0	4
0800	5	0	5	16	0	16
0815	12	0	12	20	0	20
0830	13	1	15	25	0	25
0845	9	0	9	19	0	19
0900	5	0	5	8	0	8
0915	8	1	10	5	0	5

Time Beginning	Baybarrow Road - Thursday 10th September 2020					
	1			2		
	LV	HV	PCU	LV	HV	PCU
1630	12	0	12	12	0	12
1645	9	0	9	12	0	12
1700	11	0	11	14	1	16
1715	11	0	11	17	0	17
1730	13	0	13	21	0	21
1745	20	0	20	18	0	18
1800	15	0	15	7	0	7
1815	10	0	10	10	0	10

APPENDIX D

How Bank Farm Junction Modelling Results

Junctions 8

PICADY 8 - Priority Intersection Module

Version: 8.0.6.541 [19821,26/11/2015]

For sales and distribution information, program advice and maintenance, contact TRL:
Tel: +44 (0)1344 770758 email: software@trl.co.uk Web: http://www.trlsoftware.co.uk

Filename: Site access-Baybarrow Rd.arc8
Path: N:\Vectos Job Data\2020\VN201725 Land at Egremont\Picady
Report generation date: 05/10/2020 16:23:02

Summary of junction performance

	AM		PM	
	Queue (PCU)	RFC	Queue (PCU)	RFC
	A1 - 2025 Inc Dev			
Stream B-AC	0.07	0.06	0.03	0.03
Stream C-AB	0.02	0.02	0.04	0.04
Stream C-A	-	-	-	-
Stream A-B	-	-	-	-
Stream A-C	-	-	-	-

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - 2025 Inc Dev, AM " model duration: 07:45 - 09:15
"D2 - 2025 Inc Dev, PM" model duration: 16:30 - 18:00

Run using Junctions 8.0.6.541 at 05/10/2020 16:23:00

File summary

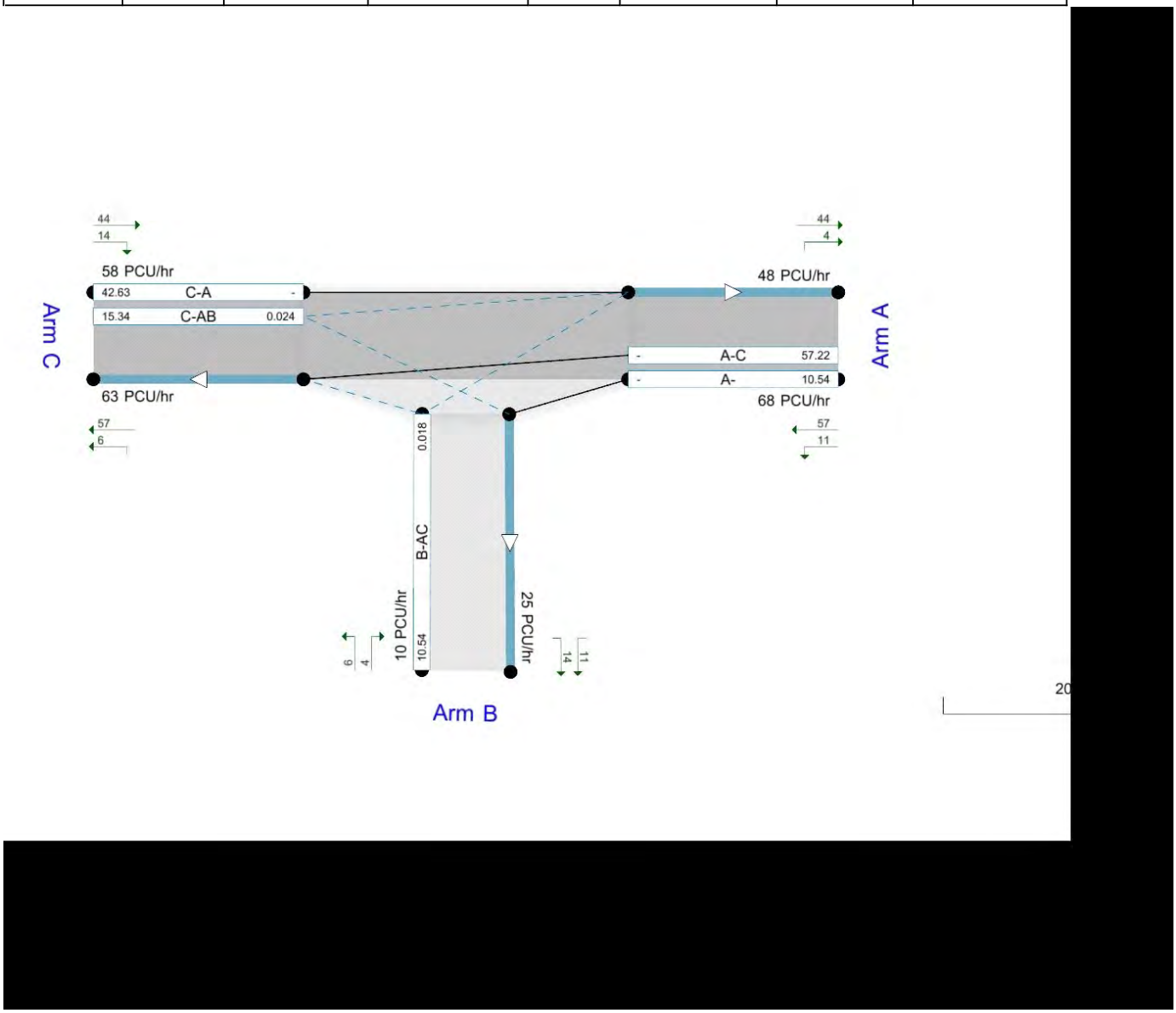
Title	(untitled)
Location	
Site Number	
Date	01/10/2020
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	james.whitton
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - 2025 Inc Dev, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2025 Inc Dev, AM	2025 Inc Dev	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C	6.27	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	Baybarrow Rd (SW)		Major
B	B	Site Access		Minor
C	C	Baybarrow (NE)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	7.00		0.00		2.20	90.00	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane	2.75										120	105

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	556.016	0.097	0.245	0.154	0.350
1	B-C	672.766	0.099	0.249	-	-
1	C-B	626.083	0.232	0.232	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	90.00	100.000
B	ONE HOUR	✓	35.00	100.000
C	ONE HOUR	✓	54.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	6.000	84.000
	B	12.000	0.000	23.000
	C	43.000	11.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.07	0.93
	B	0.34	0.00	0.66
	C	0.80	0.20	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.06	6.43	0.07	A
C-AB	0.02	5.79	0.02	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	26.35	26.17	0.00	607.86	0.043	0.04	6.187	A
C-AB	8.73	8.66	0.00	631.75	0.014	0.02	5.777	A
C-A	31.93	31.93	0.00	-	-	-	-	-
A-B	4.52	4.52	0.00	-	-	-	-	-
A-C	63.24	63.24	0.00	-	-	-	-	-

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	31.46	31.43	0.00	604.01	0.052	0.05	6.286	A
C-AB	10.53	10.52	0.00	632.91	0.017	0.02	5.783	A
C-A	38.01	38.01	0.00	-	-	-	-	-
A-B	5.39	5.39	0.00	-	-	-	-	-
A-C	75.51	75.51	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	38.54	38.48	0.00	598.69	0.064	0.07	6.426	A
C-AB	13.08	13.06	0.00	634.55	0.021	0.02	5.792	A
C-A	46.37	46.37	0.00	-	-	-	-	-
A-B	6.61	6.61	0.00	-	-	-	-	-
A-C	92.49	92.49	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	38.54	38.53	0.00	598.69	0.064	0.07	6.426	A
C-AB	13.09	13.09	0.00	634.56	0.021	0.02	5.794	A
C-A	46.37	46.37	0.00	-	-	-	-	-
A-B	6.61	6.61	0.00	-	-	-	-	-
A-C	92.49	92.49	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	31.46	31.52	0.00	604.01	0.052	0.06	6.288	A
C-AB	10.53	10.55	0.00	632.92	0.017	0.02	5.786	A
C-A	38.01	38.01	0.00	-	-	-	-	-
A-B	5.39	5.39	0.00	-	-	-	-	-
A-C	75.51	75.51	0.00	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	26.35	26.39	0.00	607.85	0.043	0.05	6.193	A
C-AB	8.73	8.74	0.00	631.75	0.014	0.02	5.778	A
C-A	31.92	31.92	0.00	-	-	-	-	-
A-B	4.52	4.52	0.00	-	-	-	-	-
A-C	63.24	63.24	0.00	-	-	-	-	-

(Default Analysis Set) - 2025 Inc Dev, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2025 Inc Dev, PM	2025 Inc Dev	PM		ONE HOUR	16:30	18:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C	6.00	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	Baybarrow Rd (SW)		Major
B	B	Site Access		Minor
C	C	Baybarrow (NE)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	7.00		0.00		2.20	90.00	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane	2.75										120	105

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	556.016	0.097	0.245	0.154	0.350
1	B-C	672.766	0.099	0.249	-	-
1	C-B	626.083	0.232	0.232	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	90.00	100.000
B	ONE HOUR	✓	14.00	100.000
C	ONE HOUR	✓	77.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	14.000	76.000
	B	6.000	0.000	8.000
	C	58.000	19.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.16	0.84
	B	0.43	0.00	0.57
	C	0.75	0.25	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.03	6.31	0.03	A
C-AB	0.04	5.78	0.04	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	10.54	10.47	0.00	595.63	0.018	0.02	6.152	A
C-AB	15.34	15.23	0.00	639.20	0.024	0.03	5.769	A
C-A	42.63	42.63	0.00	-	-	-	-	-
A-B	10.54	10.54	0.00	-	-	-	-	-
A-C	57.22	57.22	0.00	-	-	-	-	-

Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	12.59	12.57	0.00	591.39	0.021	0.02	6.219	A
C-AB	18.58	18.56	0.00	641.84	0.029	0.03	5.775	A
C-A	50.64	50.64	0.00	-	-	-	-	-
A-B	12.59	12.59	0.00	-	-	-	-	-
A-C	68.32	68.32	0.00	-	-	-	-	-

Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	15.41	15.39	0.00	585.54	0.026	0.03	6.313	A
C-AB	23.20	23.16	0.00	645.51	0.036	0.04	5.784	A
C-A	61.58	61.58	0.00	-	-	-	-	-
A-B	15.41	15.41	0.00	-	-	-	-	-
A-C	83.68	83.68	0.00	-	-	-	-	-

Main results: (17:15-17:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	15.41	15.41	0.00	585.53	0.026	0.03	6.313	A
C-AB	23.20	23.20	0.00	645.51	0.036	0.04	5.784	A
C-A	61.58	61.58	0.00	-	-	-	-	-
A-B	15.41	15.41	0.00	-	-	-	-	-
A-C	83.68	83.68	0.00	-	-	-	-	-

Main results: (17:30-17:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	12.59	12.61	0.00	591.38	0.021	0.02	6.222	A
C-AB	18.59	18.62	0.00	641.84	0.029	0.04	5.776	A
C-A	50.63	50.63	0.00	-	-	-	-	-
A-B	12.59	12.59	0.00	-	-	-	-	-
A-C	68.32	68.32	0.00	-	-	-	-	-

Main results: (17:45-18:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	10.54	10.55	0.00	595.60	0.018	0.02	6.155	A
C-AB	15.35	15.38	0.00	639.21	0.024	0.03	5.770	A
C-A	42.62	42.62	0.00	-	-	-	-	-
A-B	10.54	10.54	0.00	-	-	-	-	-
A-C	57.22	57.22	0.00	-	-	-	-	-