
August 2017



Kirklees Local Plan

**Response to the Inspector's
Matters, Issues and Questions (MIQs)**

**Matter 2 – Spatial Development Strategy
with specific reference to
Land at Grimescar Road,
Birchcliffe – Site MX1904**

Prepared by

I D Planning

On behalf of

Thornhill Estates

CONTENTS**PAGE NO.**

1.0 Response to Matter 2.....1

Appendix 1 – Optima Highways Assessment of The Bradley Golf Course Access Appraisal

Response to Matter 2 – Spatial Development Strategy

Issue – Does the overall growth and spatial strategy for the plan present a positive framework which is consistent with National Policy and will contribute to the achievement of sustainable development?

Policies PLP2,3

Questions

A. Are the boundaries of the sub-areas, as established in the place shaping chapter, appropriately defined?

B. Does the plan's vision and place shaping chapter provide a clear framework for the future growth and development of different sub-areas of the borough?

1.1 We object to the spatial development strategy as set out in Table 6.1 and the accompanying text. It is considered that the strategy is unsound as it is not justified and it is not the most appropriate strategy when assessed against the reasonable alternatives and furthermore it will not be effective for the following reasons.

1.2 The spatial development strategy seeks to sub-divide the district in 4 sub-areas based on size, character, role and function, but with no explanation as to how the boundaries have been derived. Furthermore, whilst identifying the 4 sub-areas, there is nothing within the spatial development strategy that seeks to set out how the development requirements for both employment and housing will be distributed across the 4 areas. The strategy lacks clarity and detail as to how the sub-areas are derived and how this relates to any distribution of development. This approach is considered to be fundamentally flawed as no linkage can be established between the characteristics that define the sub areas and the distribution of development requirements.

1.3 In addition, the spatial development strategy identifies a number of key principles that form the basis of the development strategy. One of these is identified as being local need for development and recognition of open spaces in urban areas. Again, there is lack of clarity and justification with this approach in terms of defining what the local needs are and what the functions are of the open spaces in the urban area that require protection. Greater clarification is required on this particular point to differentiate between land that has a recreation function and purpose and which can actually meet local needs and land which is open by default but is private, inaccessible and serves no physical function. It is considered that this differentiation is important in the spatial development strategy as greater weight should be attached to those open spaces which have a physical function and lesser weight to those which are merely open land which serves no local needs function. This approach is particularly important in the overall balance for allocations particularly when the Council is considering significant Green Belt releases (see response to Matter 8).

1.4 The spatial development strategy is also absent of the recognition that there is a significant development need for the district to be met over the 15 year period

and that there is insufficient land outside the Green Belt to meet this. The spatial development strategy should recognise the inherent need to review Green Belt boundaries and subsequently release Green Belt land for development based on a proper and robust assessment and review of the Green Belt.

- 1.5 The spatial development strategy section should include a detailed analysis and explanation as to how the 4 sub-areas and their boundaries were identified and also set out how the distribution of housing and employment development between these 4 sub-areas is directly derived and relating to the size, character and role of the sub-areas in the settlements. This may require the adoption of some of the alternatives considered or a combination of both. This being either allocated development based on the size of settlements or allocated development based on an area's character, its constraints and opportunities.
 - 1.6 The spatial development strategy should give further clarity as to how open spaces in urban areas will be assessed on the relative merit and weight to be accorded to open space based on the functions it carries out. It should clearly identify the lower grade open spaces that provide no recreational opportunity and these should be considered for development purposes.
 - 1.7 The spatial development strategy should recognise the significant growth requirements for Kirklees over the plan period, the inability of the district to address this through brownfield and urban land and identify the need for a Green Belt Review to accommodate this growth.
- C. The plan seeks to fully meet the objectively assessed employment and housing needs for the district and proposes an urban focus with some release of land from the Green Belt. What alternative strategies were appraised and why were they discounted?**
- 1.8 The Council have stepped over Urban Green Space to release Green Belt with no apparent justification or exceptional circumstances for this approach particularly where the defined Urban Green Space has no recreation or amenity function (Please see our response to Matter 8 – Approach to Site Allocations and Green Belt Release). The extent of Green Belt Releases particularly in the strategic sites is therefore unjustified and in conflict with the NPPF and the Government's White Paper, Fixing the Broken Housing Market.
- D. Paragraph 2 of the spatial development strategy (page 36 in the plan) seeks to focus most growth in the urban areas of Huddersfield and Dewsbury. Is this strategy and distribution clearly defined, justified and sustainable? To what extent will it be achieved?**
- 1.9 The spatial development strategy focuses most growth in the main urban areas of Huddersfield and Dewsbury and is reliant on 3 major Green Belt releases in the associated urban extensions at Bradley Golf Course, South Dewsbury and East Chidswell. The respective quantum and Green Belt releases at these strategic allocations is as follows:-

Bradley Golf Course – 56.37 hectares and 1,577 dwellings.

South Dewsbury (Land to the south of Raventhorpe Road/Lees Hall Road, Dewsbury) – 142.9 hectares and 2,310 dwellings during the Local Plan period with a further 1,690 beyond the plan period.

Chidswell – 114.59 hectares and 1,535 dwellings.

- 1.10 There are serious concerns over the deliverability of these 3 sites in terms of viability, the infrastructure required and delivery rates over the plan period. I set out the issues below on a site by site basis.

Dewsbury – H2089

- 1.11 The site is subject to the following constraints:-

- Major impact on a priority junction.
- Multiple access points required along with significant improvements to Sands Lane, the bridge over the railway lane, Steanard Lane and its junction with the A644 and the upgrade of the bridge over the River Calder.
- Third party land may be required for access.
- Additional mitigation on the wider highway network may be required.
- Part of the site lies within the UK BAP priority area.
- Proximity of a local wildlife site.
- Part of the site is an area of archaeological interest.
- Mine entrances are present.
- The site is affected by a high pressure gas pipeline.

- 1.12 In addition to these constraints, there are other sites specific considerations which may impact upon viability and delivery these being:-

- The provision of 2 new primary schools will be required and secondary school provision either on the site or in the locality.
- The development has the potential for a severe adverse impact on the operation of a strategic road network and will require physical mitigation measures and travel plans in order to minimise the impact of the traffic generated.

- 1.13 Two documents have been submitted to support the development of the site, a high level delivery statement and a access technical note neither of which satisfactorily address the overall constraints and issues identified with the site in the draft allocation. These issues go to the heart of delivery in conjunction with the quantum of development which would see a large number of dwellings in a single location. This will swamp the local market and as such the deliverability of that number of dwellings over the plan period has to be questioned particularly given the low value nature of the market area.

Chidswell – MX1905

- 1.14 The Chidswell draft allocation is subject to a number of constraints these being:-

- Third party land required for access.
- Multiple access points required.
- Additional mitigation on the wider highway network may be required.

- Air quality issues.
- Noise source issues.
- Part of the site lies within the UK BAP priority habitat.

1.15 In addition there are other site specific considerations which will also effect viability and deliverability in terms of:-

- The provision of a new primary school required on the site and secondary school provision either on this site or in the locality should be considered during the plan period. Early years and childcare provision will also be required relating to this allocation.
- The flood risk vulnerability of proposed uses will need to be considered and an exception test may still be required as part of a planning application as set out in national planning policy.
- The development has the potential for a severe adverse impact on the operation of a strategic road network and will require physical mitigation measures and travel plans in order to minimise the impact of the traffic generated.

1.16 The sustainable urban extension document April 2017 submitted by the landowners does nothing to properly address the overall deliverability of the site in relation to these constraints nor the viability of the development itself. It is a very generalised statement and lacks significant detail.

1.17 The interim Transport Assessment of August 2016 fails to properly assess the likely implications for the strategic road network including Junction 28 of the M62. The assessment uses a cordoned saturn model and does not take into account committed development and emerging draft allocation in the Leeds district which includes land both to the south and north of Junction 28. As such the Transport Assessment and conclusions in relation to the implications for the wider highway network cannot be relied upon and give an inaccurate position of the likely impacts. There is significant development proposed in and around Junction 28 proposed either through planning applications or draft allocations in the Site Allocations Plan for Leeds which is due to be heard at Examination in Public in October 2017.

1.18 The deliverability of this site has to be seriously questioned in this context as the potential constraints have not been fully analysed. The Transport Assessment works lacks sufficient detailed analysis and evidence base and there is no certainty that Junction 28 of the M62 can be improved to deal with the capacity of both the Chidswell site and the many applications and draft allocations coming forward in the Leeds district.

Bradley – H1747

1.19 The Bradley site which is to deliver 1,577 dwellings is subject to significant constraints including:-

- Multiple access points required.
- Third party land required for access.
- Additional mitigation on the wider highway network may be required.
- Odour sources near site.
- Noise sources near site.

- Air quality issues.
- Part of the site is within that wildlife habitat network.
- Part of the site contains a habitat of principle importance.
- The site is close to listed buildings.
- The site is in an area that effects the setting of Castle Hill.

1.20 In addition, the site requires the following:-

- The provision of a new primary school will be required on the site and secondary school provision either on the site or in the locality.
- Early years and childcare provision will be required relating to this allocation.
- Where an Ecological Assessment shows the presence of protected species, this area of site will be safeguarded from development.
- The development has the potential for a severe adverse impact on the operation of the strategic network and will require physical mitigation measures and travel plans in order to minimise the impact of traffic generated.

1.21 The submitted information which seeks to justify the deliverability of the development does not satisfactorily address all of the outstanding issues and in particular the Transport and Access Appraisal of March 2016 has been assessed by Optima Highways who conclude:-

The allocation access arrangements proposed are undeliverable as they require third party land, create several highway safety concerns, don't provide sufficient highway capacity and don't incorporate appropriate pedestrian/cycle/public transport access. The Site is therefore reliant on the potential accesses from Bradley Link and J24A and there is no certainty that these would be delivered within the plan period and there is no guarantee whether the improvements would facilitate direct access to these Allocations. Additionally the Site has been assessed by WYCA as located in an unsustainable location and access for public transport and servicing cannot be achieved to improve this assessment. The combination of these failings would result in a severe impact on the local highway network.

The Optima Highways Transport Report is contained within the Appendix at 1. In addition, the previous representations to the draft Local Plan Publication Draft submitted in relation to the subject site clearly identify that potential allocation is not in a sustainable location as set out at 6.54 of those representations.

1.22 On the basis of the foregoing, it is considered there are significant question marks about the ability of the plan to deliver the housing required given the distribution and the focus on major strategic allocations which require major infrastructure and intervention. There are alternative Urban Green Space and Green Belt sites which are without constraint on a smaller scale that do not need infrastructure improvements or intervention funding and that could deliver housing earlier in the plan period if allocated. On this basis, it is considered that the spatial development strategy is not clearly defined, justified or sustainable.

**Bradley Park Golf Course, Huddersfield
(Site References H351 and H1747)
Proposed Residential Allocation within Kirklees Site
Allocations Plan
Highway Documentation Review**

September 2017 (Initial Issue)

Prepared on behalf of
Thornhill Estates

Quality Management

Bradley Park Golf Course, Huddersfield - Highway Documentation Review Project No: 15117				
File reference	O:\Bradley Park Golf Course\TEXT\REPORTS\170901 Bradley Park Response.docx			
Issue/revision	Initial Issue	Revision 1	Revision 2	Revision 3
Remarks	Draft			
Date	1 st September 2017			
Prepared by	S Phillips			
Signature				
Checked by	M Whittaker			
Signature				
Authorised by	S Phillips			
Signature				

This document has been prepared for the exclusive use of the Client and unless otherwise agreed in writing by them or by Optima Highways and Transportation Ltd, no other party may use, make use of or rely on the contents of this document. This document cannot be assigned or transferred to any third party without the express written agreement of both Optima Highways and Transportation Ltd and the Client.



Contents

1. Introduction	1
2. Site Access Arrangements	4
3. Development Phasing and Traffic Impact	16
4. Site Accessibility.....	19
5. Summary and Conclusions.....	22

IMAGES

Image 2.1 Fore Consulting Potential Access Locations	4
Image 2.2 Bradford Road Potential Access Extract.....	5
Image 2.3 View to the right (North) from Farm Access	6
Image 2.4 View to Farm Access from the North on the A641	6
Image 2.5 Lamb Cote Road Potential Access Extract.....	7
Image 2.6 Tithe House Way Potential Access Extract.....	9
Image 2.7 Cooper Bridge Draft Highway Scheme - Extract of Drawing 2 of Transport Model Technical Paper April 2017	11

TABLES

Table 2.1 Vehicles at Lamb Cote Road (250 dwellings).....	13
Table 2.2 Vehicles at Tithe House Way (Additional 500 dwellings).....	13
Table 2.3 Vehicles at Lamb Cote Road (250 dwellings).....	14
Table 2.4 Vehicles at Tithe House Way (500 dwellings)	14
Table 3.1 Impact on AQMA	18
Table 4.1 Existing Mode Split	21

FIGURES

Figure 1 – Allocations Location Plan - Strategic
Figure 2 – Allocations Location Plan - Local
Figure 3 - Potential Site Access Locations
Figure 6 - Bus Stop Accessibility

APPENDICES

Appendix A Fore Consulting Potential Access Arrangements
Appendix B Optima Review of Fore Consulting Access Arrangements
Appendix C Swept Path Analysis of Fore Consulting Access Arrangements
Appendix D Third Party Ransom Strip at Tithe House Way - Optima Drawing 15117/IN/05
Appendix E WYCA Accessibility Assessment
Appendix F 2011 Census Residential Mode Split



1. Introduction

1.1.1 This Highway Review has been undertaken by Optima to consider the highways and transportation issues raised by the proposed allocations (H351 and H1747) for a combined development quantum of 1,958 on land to the north of Bradley Road, Bradley.

1.1.2 This report supersedes some elements of the previous Technical Note submitted on these Sites dated January 2016, due to the changes to the allocations since the previous report was written. This report also reviews the two reports produced by Fore Consulting in support of the allocation dated March 2016 and September 2016 which consider the off-site traffic impact of the allocations and the potential access arrangements.

1.1.3 The constraints to development associated with sites H351 and H1747 are set out within the Councils Local Plan 2013-2031 summary document, which states the following:

H351 - Land north of Bradley Road, Bradley (11.97 Hectares) - Circa 381 Dwellings

- Two access point are required;
- Third party land required for access;
- Additional mitigation on the wider highway network may be required;
- Limited surface water drainage options;
- Third party land required to achieve drainage solution;
- Odour source near site;
- Noise source near site;
- Site is close to listed building; and
- Site includes an archaeological site.

H1747 - Land north of Bradley Road, Bradley (56.37 Hectares) - Circa 1,577 Dwellings

- Multiple access points required;
- Third party land required for access;
- Additional mitigation on the wider highway network may be required;
- Public right of way crosses the site;
- Ordinary watercourses cross the site;
- Potentially contaminated land;
- Odour source near site;
- Noise source near site;
- Air quality issues;
- Part of this site is within the Wildlife Habitat Network;
- Part of this site contains a Habitat of Principal Importance;
- Site is close to listed buildings;
- Part/all of site within High Risk Coal Referral area;



- Power lines cross the site; and
- Site is in an area that affects the setting of Castle Hill.

1.1.4 The Councils summary also confirms the following specific transport related considerations:

H351 - Land north of Bradley Road, Bradley (11.97 Hectares) - Circa 381 Dwellings

- This site should be considered along with H1747 as part of a wider masterplan including having regard to site specific considerations listed for H1747; and
- Development may need to contribute to improvements to the strategic road network if committed schemes will not provide sufficient capacity.

H1747 - Land north of Bradley Road, Bradley (56.37 Hectares) - Circa 1,577 Dwellings

- Links required to core cycling network;
- This site requires the provision of multiple access points and will need to be carefully phased to ensure it complies with other policies in the Local Plan regarding transport; and
- This development has the potential for a severe adverse impact on the operation of the Strategic Road Network and will require physical mitigation measures and travel plans in order to minimise the impact of the traffic generated. Highways England has a number of planned improvements to the Strategic Road Network funded as part of the government's Road Investment Strategy (RIS). These schemes will provide additional capacity at congested locations. Development proposals will need to demonstrate that any committed RIS schemes are sufficient to deal with the additional demand generated by that site. Where committed schemes will not provide sufficient capacity or where Highways England does not have committed investment, sites may need to deliver or contribute to schemes identified in the Infrastructure Delivery Plan or other appropriate schemes. Construction of the site should also be phased to take place following completion of the committed RIS improvements.

1.1.5 The location of the joint Bradley Park Golf Course Allocation in relation to the strategic highway network is shown in Figure 1. The combined indicative allocation boundary for Sites H351 and H1747 in relation to the local highway network is shown in Figure 2.

1.1.6 This report has taken account of the current local highway design guidance (West Yorkshire Design Guide (WYDG)) as well as overarching national design guidance in Manual for Streets (MfS & MfS2) and the Design Manual for Roads and Bridges (DMRB) where appropriate.

1.1.7 The local plan has been prepared based on the following four tests as set out in Kirklees Local Plan: Methodology Part 1 National Policy requirements:

1. **Positively prepared;** the plan should be prepared based on a strategy which seeks to meet objectively assessed development and infrastructure requirements, including unmet requirements from neighbouring authorities where it is reasonable to do so and consistent with achieving sustainable development;
2. **Justified;** the plan should be the most appropriate strategy, when considered against the reasonable alternatives, based on proportionate evidence;
3. **Effective;** the plan should be deliverable over its period and based on effective joint working on cross - boundary strategic priorities; and



4. **Consistent with national policy;** the plan should enable the delivery of sustainable development in accordance with the policies in the Framework.

1.1.8 This report reviews the suitability of the Site and highlights the constraints associated with delivering the proposed level of housing in this location. It also identifies what improvements might be required in order to ensure that the development does not result in a severe impact on the local highway network. The document structure is as follows:

- Chapter 2 – reviews the Site access proposals within the Fore Consulting reports for pedestrians, cyclists, vehicles and public transport;
- Chapter 3 – provides an assessment of the anticipated vehicular impact from the development Site on the local and strategic highway network including a materiality assessment of key local junctions. This also includes an assessment of the likely impact of a potential new motorway junction (J24A) provided onto the M62 and improvements at Cooper bridge;
- Chapter 4 – reviews the accessibility and sustainability of the Site ; and
- Chapter 5 – highlights the conclusions of the report.



2. Site Access Arrangements

2.1 INTRODUCTION

2.1.1 As confirmed within the Site Allocations Policy at least two access points are required to serve Site 351 and multiple access points are required for Site H1737. In addition to these vehicular accesses further points of access are required to accommodate pedestrians and cyclists on key desire lines.

2.1.2 The Allocation Policy confirms that third party land is required to achieve access into the Site. No evidence has been provided to suggest that any negotiations have taken place or agreements reached with the numerous third parties which are critical to the delivery of the allocation. Clearly the numerous third parties represent a 'ransom' to the delivery of the allocation and there is no guarantee that any of the third party land will be available for purchase.

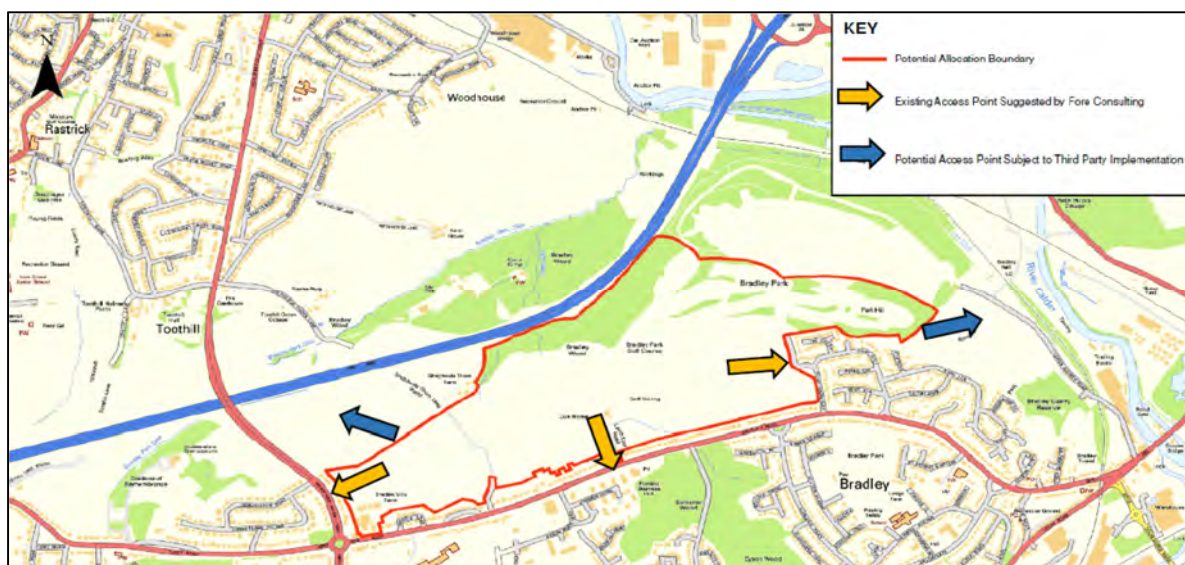
2.1.3 In light of the above the proposed allocation doesn't meet the Council's third test of being 'Effective' as the allocation isn't deliverable.

2.1.4 The majority of the combined Site is landlocked as the Site abuts the M62 motorway to the north, a Quarry to the east, residential dwellings with frontage access onto A6107 Bradley Road to the south and residential dwellings with frontage access onto the A641 Bradford Road to the west.

2.1.5 The Fore Consulting Reports highlight four preferred access points whilst reference has also been made to the potential access from the yet to be built J24A. The location of these accesses are shown on Figure 3 and Image 2.1 which are summarised as follows:

1. Left in/Left out farm access from A641 to Bradley Villa Farm Shop;
2. Lamb Cote Road from Bradley Road- which currently serves Bradley Park Golf Course;
3. Tithe House Way from Tithe House Way - Informal maintenance access to Bradley Park Golf Course;
4. Access via new Bradley Link; and
5. Access via new J24A junction.

Image 2.1 Fore Consulting Potential Access Locations

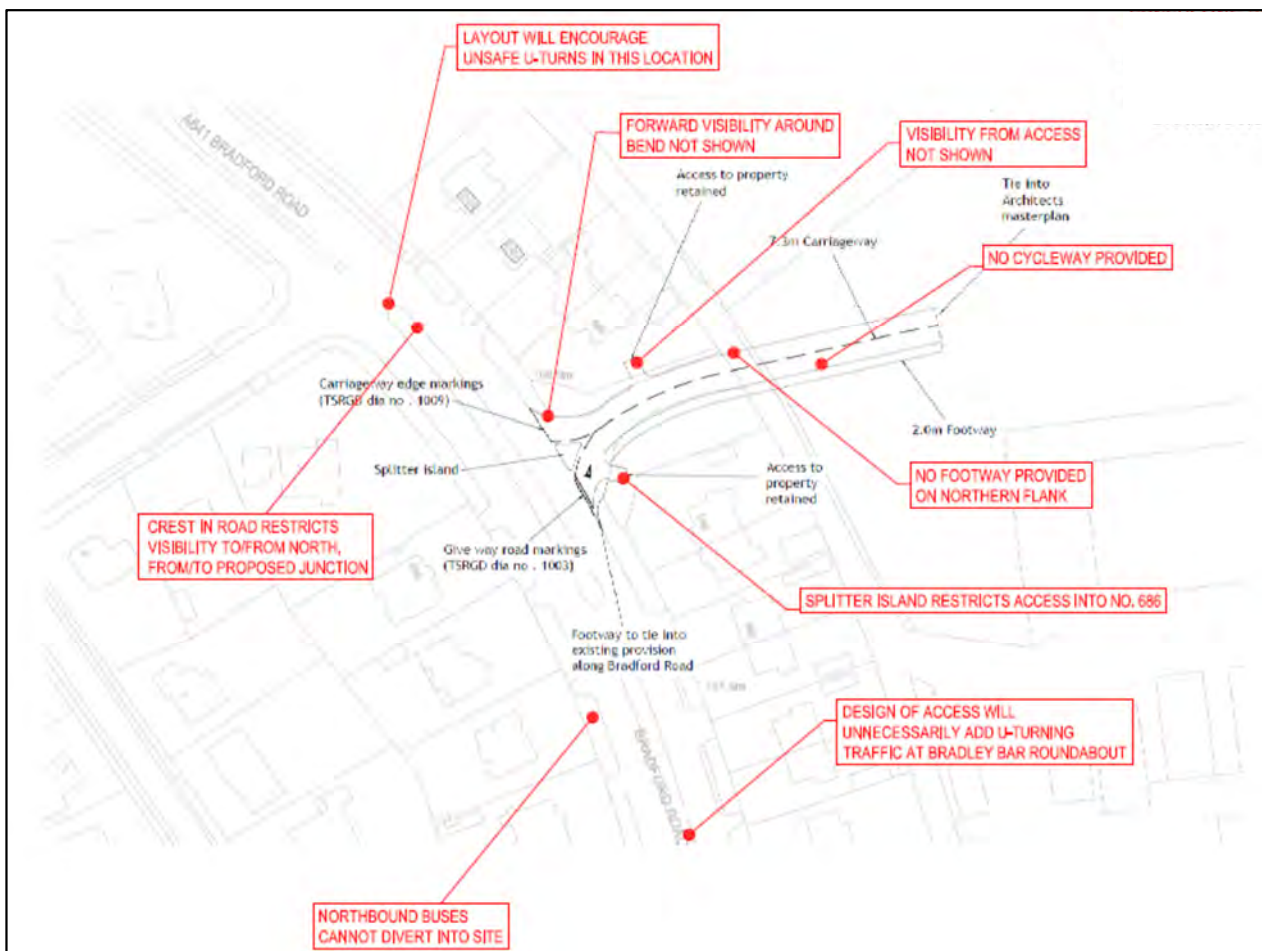


2.1.6 The suitability of each access point has been assessed against local and national guidance. The current local highway design guidance is the WYDG, whilst MfS and DMRB provide overarching national guidance.

2.2 A641 BRADFORD ROAD LEFT IN/LEFT OUT

2.2.1 A plan (3367 SK0001 01) has been prepared by Fore Consulting of the potential access arrangement onto Bradford Road and this is shown in Appendix A. There are a number of safety concerns and a lack of critical information associated with this access as described below and highlighted on the Optima sketch in Appendix B.

Image 2.2 Bradford Road Potential Access Extract



- Visibility for vehicles exiting the allocation is restricted by a crest in the road - a minimum visibility splay of 2.4m x 160m is required in accordance with DMRB for a 50mph speed limit. However as the 50mph zone is within close proximity to the Site access and high vehicle speeds have been observed in this location on a number of occasions, it is considered essential to justify the level of visibility by undertaking a vehicle speed survey and confirming that the splay is achievable in both the horizontal and vertical planes. A visibility splay of 2.4m x 160m does not appear to be achievable (see image 2.3 and 2.4) - Limited vertical visibility in this location would result in a highway safety issue;



Image 2.3 View to the right (North) from Farm Access**Image 2.4 View to Farm Access from the North on the A641**

- No right turn into or out of Site has been provided - This is likely to cause unsafe u-turning manoeuvres within the retained central reserve break for right turn into Dorchester Road. If the existing right turn facility is removed into Dorchester Road, this will add additional pressure onto the already congested Bradley Bar Roundabout by increasing the number of u-turning movements;
- Northbound buses on the A641 would be unable to route into the Site, contrary to the statement in Section 6.3 of the Fore Report (V1.0) which advocates buses diverting into the Site;



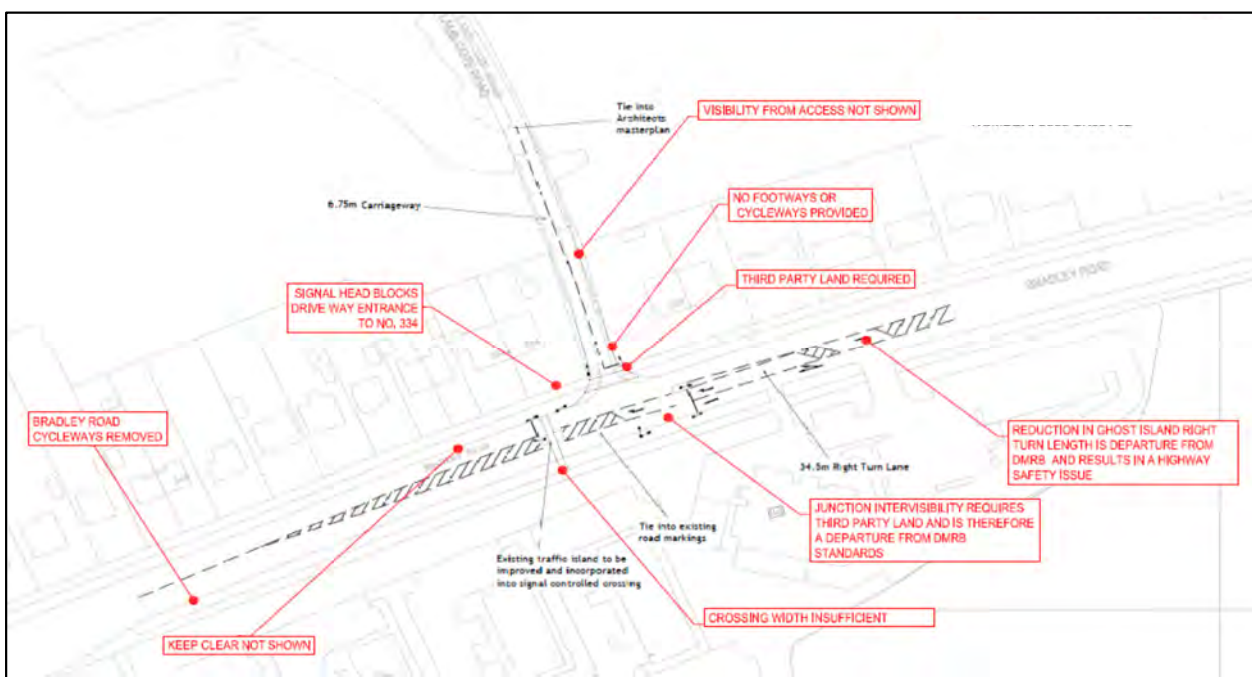
- A swept path analysis (attached in Appendix C) shows large vehicles would need to use both lanes to exit - which would reduce the capacity of the junction and could result in highway safety concerns;
- No capacity assessment provided to demonstrate that access has sufficient capacity both with and without flows associated with J24A which would be situated some 400m to the northwest of the access;
- Access to No. 686 Bradford Road is restricted by proposed splitter island which would mean that cars would have to enter the development and turn within the junction bell mouth, whilst caravans/vans would no longer be able to access the property;
- Visibility for vehicles exiting No. 688 is not shown and due to limited width and lack of footway provision, insufficient visibility can be achieved - forward visibility to vehicles entering the site is also not shown and could cause an issue given the generous radii and speed of Bradford Road;
- A Footway is only provided on the southern side of the junction; and
- No cycle provision shown.

2.2.2 The proposed access in this location would not be suitable due to the limited vertical visibility to the right (north) when exiting the Site causing a highway safety concern. The other issues highlighted further prevent any access in this location due to concerns over highway safety, capacity, bus penetration, substandard pedestrian and cycle provision and land ownership issues.

2.3 LAMB COTE ROAD SIGNALISED JUNCTION

2.3.1 A plan (3367 SK001 02) has been prepared by Fore Consulting of the potential access arrangement from Lamb Cote Road onto Bradley Road and this is shown in Appendix A. There are a number of safety concerns and a lack of critical information associated with this access as described below and highlighted on the Optima sketch in Appendix B.

Image 2.5 Lamb Cote Road Potential Access Extract



- The design shown requires third party land (No. 332 Bradley Road) and is therefore not deliverable and doesn't meet the third test of being an effective plan;
- The arrangement proposes to shorten the existing right turn lane into the public house/restaurant on the southern side of Bradley Road from 35m to 12m. DMRB recommends a minimum of 35m for the right turn lane and this should therefore not be shortened due to the potential for head on and rear shunt collisions given the proximity of the junction with Lamb Cote Road;
- The width of carriageway is not sufficient to accommodate the bus route for a development of over 400 dwellings;
- The required junction intervisibility at a signalised junction would require additional third party land;
- A swept path analysis in Appendix C shows large vehicles aren't able to left turn into the Site or left turn out of the Site and therefore the servicing requirements of the Site (shops, refuse, sports facilities) cannot be undertaken from this access;
- The capacity analysis shows that the junction is operating above the desirable capacity and would cause congestion on the network. Additionally, the basis of the capacity assessment hasn't been provided and it is considered that it underestimates the requirement as the size of the junction is significantly smaller than the adjacent Dyson Wood Way signalised junction which requires three lanes in a westbound direction and two exit lanes - an XY capacity analysis has been completed in the subsequent section which confirms that the access design is substandard;
- Access to No. 334 Bradley Road is restricted by the proposed signalised junction as the secondary signal head blocks driveway access whilst vehicles exiting No.334 would do so in the centre of the junction through a potential reversing manoeuvre due to inadequate room to turn within the plot;
- Visibility for vehicles exiting No. 332 Bradley Road is not shown and due to limited width and no footway, provision appears to be inadequate;
- No footways are shown and from the masterplan this appears to be the main access to the proposed shops, primary school and access to the existing secondary school. As designed pedestrians would be required to walk along the main spine road which results in significant and unacceptable highway safety concerns; and
- No new cycle provision shown which is considered essential to achieve satisfactory access to a development of this scale. Furthermore existing cycle lanes on Bradley Road are proposed to be removed as part of the access arrangements to the detriment of highway safety.

2.3.2 The access arrangements proposed to serve the allocation in this location cannot be achieved. The junction separation between Lamb Cote Road and the Public House cannot be resolved within the adopted highway or within the allocation boundary and as such the access arrangement proposed is not deliverable. The current bus route strategy and local centre servicing would be reliant on this access and these elements can also not be delivered.

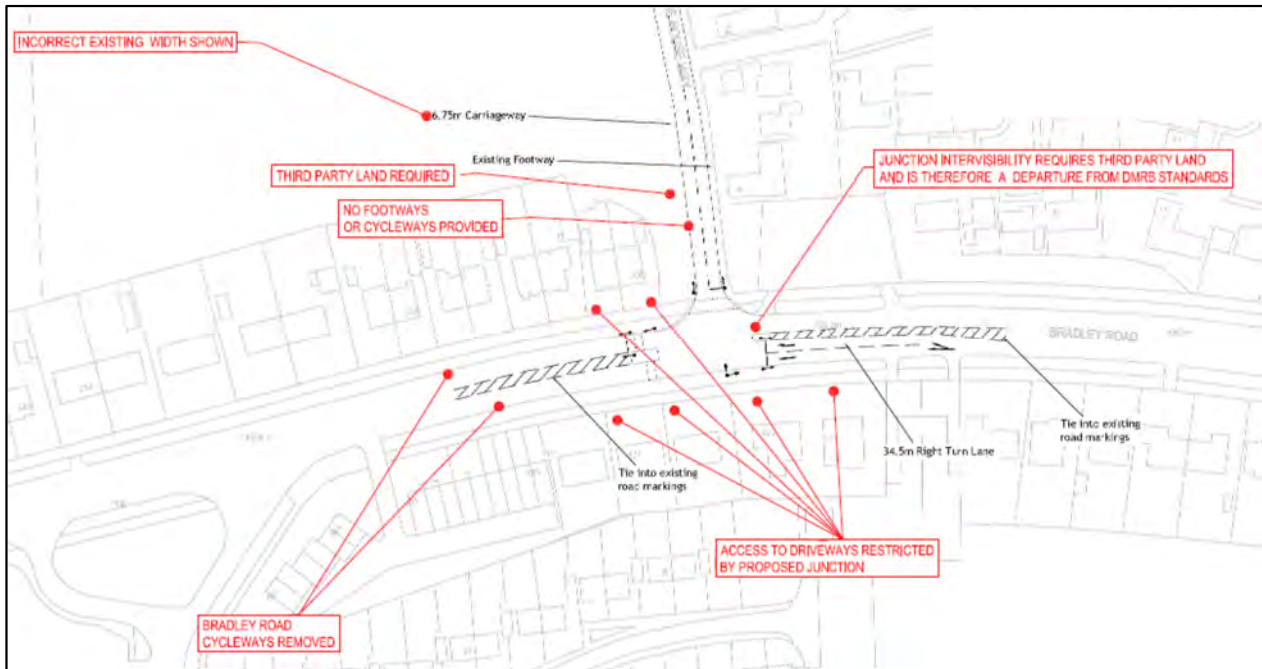
2.4 TITHE HOUSE WAY SIGNALISED JUNCTION

2.4.1 A plan (3367 SK001 02) has been prepared by Fore Consulting of the potential access arrangement from Tithe House Way onto Bradley Road and this is shown in Appendix A. There are a



number of safety concerns and lack critical information associated with this access as described below and highlighted on the Optima sketch in Appendix B.

Image 2.6 Tithe House Way Potential Access Extract



- The dimension of the carriageway on the Fore Consulting drawing confirms 6.75m, however the existing road is 6m wide and the area of land to the west is under third party control as such a width of 6.75m is not deliverable. The width of carriageway is not sufficient to accommodate the bus route for a development of over 400 dwellings;
- The signalised junction with a reduced width of 6m could be implemented without third party land, however two lanes are provided on Tithe House Way as indicated by the Fore Consulting report, therefore third party land would be required as shown on the plan in Appendix D (15117-IN-05). The modelling undertaken by Fore Consulting showed a maximum of 250 dwellings could be served from a single entry on Tithe House Way. Circa 122 are already served from this junction and therefore only an additional 128 dwellings could be served from the access arrangements proposed;
- The required junction intervisibility at a signalised junction would require additional third party land;
- A swept path analysis attached in Appendix E shows large vehicles aren't able to left turn into the Site or left turn out of the Site and therefore the servicing requirements of the Site (shops, refuse, sports facilities) cannot be completed;
- The capacity analysis provided by Fore Consulting shows that the junction is operating above the desirable capacity and would cause congestion on the network. Additionally, the basis of the capacity assessment hasn't been provided and it is considered that it underestimates the requirement as the size of the junction is significantly smaller than the adjacent Dyson Wood Way signalised junction which requires three lanes in a westbound direction and two exit lanes - an XY capacity analysis has been completed in the subsequent section which confirms that the access arrangements are substandard.



- Access to several properties on Bradley Road (plots 173, 175 and 206) will be restricted by the proposed signalised junction as several private drives will be located within the centre of the signalised junction and affected by the proposed position of signal equipment. Limited turning facilities are provided on plot leading to cars potentially reversing out into the centre of a signalised junction;
- No footway is shown on the Site side of the access arrangement which would limit pedestrian movements from/to the Site; and
- No cycle provision shown whilst the existing cycle lanes on Bradley Road are proposed to be removed as part of the access proposals.

2.4.2 Given the constraints above, an appropriate access to serve this quantum of development in this location isn't achievable without third party land and the widening of the Bradley Lane Corridor to remove all the trees in the verge to allow for additional through lanes and the retention of the existing cycle lanes on Bradley Road.

2.5 ACCESS ONTO PROPOSED BRADLEY LINK

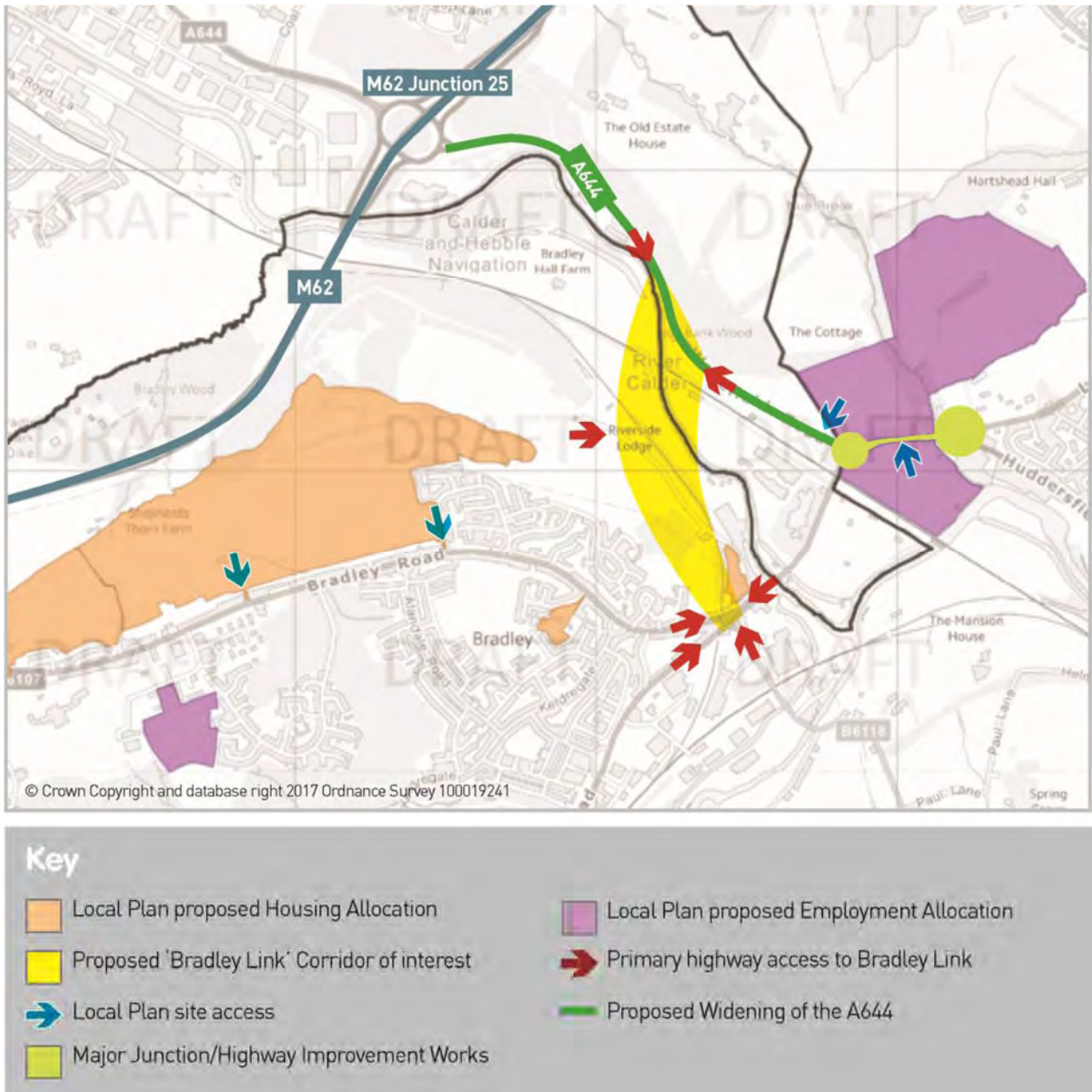
2.5.1 The Fore Consulting report V2.0 confirms that to serve more than 750 dwellings, an access onto the proposed Bradley Link would be required. The exact proposals for the Bradley link are unknown at this stage, funding is currently available through the WYTF to deliver an improvement in the Cooper Bridge area, however the precise scheme is unknown at this stage. If this link was a preferred option it would need to be costed and be subject to a rigorous economic assessment and as such there is no guarantee of delivery of any additional dwellings being served from the link road - this is acknowledged by Fore Consulting in Section 3.3 of the V2.0 report:

Option 7 - An access at this location would reduce the impact of development traffic on Bradley Road and A641 as it is assumed a significant proportion of journeys from the Site would wish to access the M62. However, the access is likely to be dependent on the A62 Cooper Bridge proposals being developed by Kirklees Council and to be taken forward via the WY+TF.

2.5.2 The indicative alignment of the link road is shown in Image 2.5, which shows a significant gap between the Site and link road study area and therefore it is not known whether this missing link could be deliverable or whether there would be a further third party land constraint.



Image 2.7 Cooper Bridge Draft Highway Scheme - Extract of Drawing 2 of Transport Model Technical Paper April 2017



2.6 ACCESS ONTO J24A

2.6.1 The reports also suggest that there is potential to provide improved access once the M62 J24A access is built to the northwest of the Site. The ability to access this junction will be subject to acquiring third party land, gaining approval from Highways England and an assessment of capacity and therefore cannot be relied upon as a potential access into the Site.

2.6.2 The delivery of the M62 J24A proposal will be discussed in more detail in Chapter 3.

2.7 CAPACITY ANALYSIS ASSUMPTIONS

2.7.1 The capacity analysis within the Fore Report (V2.0) has been completed based on the following flawed assumptions:



- Counts are from 2007 and are therefore 10 years out of date and are not considered representative of the highway network;
- A superseded version of TEMPro (6.2) has been used instead of the latest updated version (7.2)- An assessment for Kirklees 022 has shown the growth rate is higher than used in the Fore Consulting Report and therefore the modelling underestimates the flows on the network;
- An assessment year of 2020 has been used for the assessment of 750 dwellings. Section 5.2 of their own report confirms the SATURN model used by Kirklees assumes that this quantum won't be built out until 2023. Even this timeframe seems overly optimistic as it would rely on three developers building out from three separate accesses. The Bradley Link won't be available initially (if at all) and therefore this timeframe, and as such traffic growth on Bradley Road has been further underestimated;
- No allowance appears to have been given to any consented development schemes in the local vicinity;
- The capacity analysis appears to assume no primary school, shops or sports facility traffic which should be implemented at an early stage due to the current lack of facilities in the local area;
- It is unclear whether the flows at the access points have been routed past the adjacent accesses;
- It is unclear whether any allowance has been made for existing trips on Tithe House Way; and
- It is unclear whether the capacity assessments have included a pedestrian stage in the capacity analysis. If this hasn't been included this would impact the capacity of the junction significantly.

2.7.2 In order to compare the modelling of the Site access junctions in the absence of information provided by Fore Consulting an XY assessment has been completed in the following section.

2.8 XY CAPACITY ANALYSIS

2.8.1 Traffic counts were undertaken at the Bradford Road/Bradley Road roundabout junction in May 2016 and the flows on Bradley Road to the east of the junction are shown in PCUs in Table 2.1. The flows have been growthed up to 2025 (anticipated earliest opportunity for 750 dwellings) and the trip rates/generations as per Tables 6-9 of the Fore Consulting Report V2.0.



Table 2.1 Vehicles at Lamb Cote Road (250 dwellings)

Movement	2016 AM Total Flow	2016 PM Total Flow	2025 AM Growthed Flow* (13.085%)	2025 PM Growthed Flow* (13.744%)	AM Dev Flows	PM Dev Flows	AM 2025 Total Flows	PM 2025 Total Flows
Westbound	920	1040	1,040	1,183	148**	68**	1,188	1,251
Eastbound	1161	962	1,313	1,094	42**	112**	1,355	1,206
Site Left Turn In	0	0	0	0	21	56	21	56
Site Right Turn In	0	0	0	0	21	56	21	56
Site Left Turn Out	0	0	0	0	74	34	74	34
Site Right Turn Out	0	0	0	0	74	34	74	34

*2025 assumed based on two developers (100 units built per year) and 7.5 year construction period from mid 2018 start.

**Associated with other accesses

2.8.2 A total of 366 dwellings are already served from Tithe House Way along with a second access. It is assumed that a third (122) of the existing dwellings will utilise this access. The trips associated with the existing dwellings are also shown in Table 2.2 as turns into/out of access.

Table 2.2 Vehicles at Tithe House Way (Additional 500 dwellings)

Movement	2016 AM Total Flow	2016 PM Total Flow	2025 AM Growthed Flow* (13.085%)	2025 PM Growthed Flow* (13.744%)	AM Dev Flows	PM Dev Flows	AM 2025 Total Flows	PM 2025 Total Flows
Westbound	920	1040	1,040	1,183	21**	56**	1,061	1,239
Eastbound	1161	962	1,313	1,094	74**	34**	1,387	1,128
Site Left Turn In	10	27	0	0	42	112	52	139
Site Right Turn In	11	27	0	0	42	112	53	139
Site Left Turn Out	36	16	0	0	148	68	184	84
Site Right Turn Out	36	17	0	0	148	68	184	85

*2025 assumed based on two developers (100 units built per year) and 7.5 year construction period from mid 2018 start.

**Associated with other accesses

2.8.3 The XY Modelling assumptions are as follows:

- 60s cycle;
- 6s Intergreens;
- No blocking occurs due to sufficient right turn storage;
- Pedestrian stage demanded every second cycle (Assumed 16 second period for pedestrian phase divided by two for 8s lost per cycle);



- 1,800 Sat Flows for Ahead/Left Movements and 1,650 for Left/Right Movements; and
- Right turn into Site gives way and majority of movements undertaken within intergreen.

2.8.4 The results of the XY analysis for the two junctions is shown in Tables 2.3 and 2.4.

Table 2.3 Vehicles at Lamb Cote Road (250 dwellings)

Movement	AM 2025 Total Flows	Seconds in Stage (in hour)	Capacity of link (Sec/3600 X Sat Flow)	Ratio of Flow to Capacity	PM 2025 Total Flows	Seconds in Stage (in hour)	Capacity of link	Ratio of Flow to Capacity
Total Westbound	1,209	33 (1,980)	990	1.22	1,307	33 (1,980)	990	1.32
Total Eastbound	1,376	33 (1,980)	990	1.39	1,262	33 (1,980)	990	1.27
Site Access	148	7 (420)	193	0.77	68	7 (420)	193	0.35

Table 2.4 Vehicles at Tithe House Way (500 dwellings)

Movement	AM 2025 Total Flows	Seconds in Stage (in hour)	Capacity of link	Ratio of Flow to Capacity	PM 2025 Total Flows	Seconds in Stage (in hour)	Capacity of link	Ratio of Flow to Capacity
Total Westbound	1,114	33 (1,980)	990	1.13	1,378	33 (1,980)	990	1.39
Total Eastbound	1,439	33 (1,980)	990	1.45	1,267	33 (1,980)	990	1.28
Site Access	368	7 (420)	193	1.91	169	7 (420)	193	0.88

2.8.5 The results of the modelling of the two junctions shows that both junction layouts are inappropriate for the level of flows predicted. At least two lanes in each direction on Bradley Road are required as a minimum for both junctions in order to cope with the anticipated level of trips on the network. Whilst a single lane may be appropriate for the Lamb Cote Road approach, at least two lanes are required for the Tithe House Way junction.

2.9 SITE ACCESS SUMMARY

2.9.1 A review of the proposed Site Access arrangements has demonstrated a number of highway safety concerns, whilst an assessment of the highway capacity in a realistic design year with up to date traffic flows has demonstrated that the proposed junctions do not have sufficient capacity to cater for the development traffic.

2.9.2 As such it can be concluded that these allocations cannot be accessed from the Site access arrangements shown in the Fore Consulting report V2.0 due to third party land ownership constraints, highway safety and capacity issues. The development of the Site would therefore be wholly reliant on the implementation of the Bradley Link and a connection to J24A in order to provide two appropriate accesses onto the highway network. There is no guarantee that either of these improvements are/can be implemented in a way which would facilitate access to this



allocation and as such appropriate access to these allocations is not deliverable and doesn't meet the third test of effective *'the plan should be deliverable over its period'*.



3. Development Phasing and Traffic Impact

3.1.1 The impact of the development phasing at key junctions needs to be considered with cognisance of the delivery of J24A and the Cooper Bridge Improvement Schemes. The current position of the schemes is detailed within this chapter.

3.2 J24A EFFECT

3.2.1 Whilst it is acknowledged that J24A is an aspiration within Kirklees/Calderdale's Local Plan it is not a committed highway improvement scheme within Highway England's forecasted work. The scheme has no firm commitment or full funding and as such cannot be relied upon.

3.2.2 The West Yorkshire Combined Authority (WYCA) have an aspiration to provide an additional junction onto the M62 at J24A located on the A641. A report from the WYCA in July 2015 confirmed the cost would be some £12.85 million and it confirmed that Highways England were resourcing the planning stage of the scheme. Following discussions with Highways England it has been confirmed that they are no longer resourcing the scheme and that there isn't a Highways England budget to develop the scheme any further. As such the deliverability of the Scheme is highly uncertain.

3.2.3 Due to the early stage in the process where the final scheme and funding has not been identified, it is not anticipated that the scheme could be brought forward immediately and any scheme would take circa 5 years to implement following consent for funding the scheme. Given the current status of the scheme it is anticipated that the earliest realistic completion date would be 2023. However the implementation of managed motorways is likely to delay this process further and until at least 2026.

3.2.4 No timescale for completion of the M62 J20 to J25 managed motorways is currently available however a cost of up to £392.3m has been identified. The M62 Smart motorways between M60 J8 and M62 J20 is expected to take 39 months for completion at a cost of £208.3m. If the smart motorways construction timeline is broadly related to the construction costs the anticipated timeframe for completion can be predicted on a pro rata basis. The start date is anticipated to be March 2020 (assuming no delays) and the time frame for completion on a pro rata basis would be 73 months (6 years 1 month).

3.2.5 The introduction of J24A would significantly alter the existing traffic flows around the north of Huddersfield. This would cause an increase in flows on Bradley Road and the A641 Bradford Road corridor with corresponding reductions at Ainley Top and around Cooper Bridge associated with traffic joining the M62 at J24A rather than Junctions 24 or 25.

3.3 BRADLEY LINK & COOPER BRIDGE IMPROVEMENT

3.3.1 The WYCA have funding in place to provide an improvement at Cooper Bridge through the WYTF. The exact scheme is still in the process of being finalised with several options being looked at for improving the area.

3.3.2 As the exact scheme at Cooper Bridge is still undergoing feasibility studies, the Bradley Link as shown in Drawing 2 of the Kirklees Council Transport Model Technical Paper may not be delivered subject to design and relevant economic viability case. It is considered that this option has the following difficulties to delivery which may affect the economic case:

- Network Rail - The alignment shown in the transport model (Drawing 2) requires the crossing of three existing rail lines;
- River Calder and Hebble - The alignment shown requires the additional crossing of the River Calder in close proximity to the railway line;



- Given the above, the required span of the main bridge would be required to go over both rail lines and the River Calder with a length of circa 300-350m;
- The area on the northern side of the river and railway is limited prior to the A644 and a landing point for the bridge with sufficient highway capacity may be difficult;
- Greenbelt Site Area;
- Flood Zone 2, 3, 3ai and 3b; and
- Third Party Ownership.

3.3.3 Due to the above, there is no certainty of the Bradley Link being delivered or at least within the plan period.

3.3.4 No assessment has been undertaken of the impact of the entire development without J24A and Bradley Link Road and the delivery of these schemes hasn't been designed nor has funding been secured.

3.3.5 The review of the access arrangements have shown that the Bradley Road and Bradford Road access options would be insufficient to serve a small proportion of the allocation and therefore the allocation is reliant on access through these larger strategic highway improvement schemes prior to the initial phase of development.

3.3.6 Due to the above and the reliance on these allocations on the delivery of these junction improvement it is highly unlikely that both J24A and Bradley Link will have gained funding and for both to have been constructed by 2030. If both schemes have been constructed then it is even further unlikely that 2,000 houses could be built in the timeframe following the implementation of these two schemes.

3.4 DEVELOPMENT PHASING

3.4.1 Fore Consulting have assumed the following delivery of the scheme based on the access arrangements:

- 250 served off Lamb Cote Road - the masterplan also shows the shops and primary school located from this access;
- 500 served from Tithe House Way;
- Secondary Left In/Left Out access from A641 Bradford Road for up to 750;
- Further 1,250 served from New Bradley Link

3.4.2 As confirmed in Chapter 2, it is considered that the quantum as proposed above would not be safely accommodated onto the existing highway network without both the access to the New Bradley Link and a new connection with the proposed J24A. Only with these two connections would suitable access provision be provided into the development for this quantum of development. The accesses on Lamb Cote Road, Tithe House Way and onto the A641 are considered to only be capable of accommodating a small number of dwellings or used as a secondary/emergency access.

3.4.3 The options for access onto Bradford Road and Bradley Road without the introduction of an access onto the proposed J24A junction or the Bradley Link Road is limited and as such the build out of the Site would be restricted by the progress of the Bradley Link and J24A.

3.4.4 Allocation H351 doesn't have an appropriate access as the left in/out arrangement on Bradford Road is likely to cause a highway safety issue with vehicles u-turning in inappropriate locations and there will be a detrimental impact on the already congested Bradley Bar Roundabout.



As such this Site could not start construction/occupation until either an access is taken from the new J24A junction (if possible and subject to Highways England agreement) or access is provided through the entire allocation.

3.4.5 Allocation H1474 requires third party land in order to deliver an access arrangement and as such there is no guarantee that these accesses could be provided to deliver even a small number of properties.

3.4.6 It is anticipated that construction of smart motorways will take place from 2020 to 2026 and as such the start of construction of the Site North of Bradley Road wouldn't commence until after April 2026. This would leave 5 years within the plan period for the 2,000 houses to be built out. This equates to 400 houses per annum which is significantly higher than the average 40-50 per annum per housebuilder. As such it is considered that this Site couldn't be built out within the plan period and be in line with the below requirement.

Construction of the site should also be phased to take place following completion of the committed RIS improvements.

3.4.7 As such either the allocation will have an impact on the M62 network improvements or the quantum of development proposed will not be provided within the plan period.

3.5 IMPACT ON AQMA

3.5.1 Prior to the delivery of the Bradley Link which will potentially bypass the AQMA, the allocation will impact directly on the AQMA as shown in Table 3.2. The junction around the AQMA is congested and the addition of trips associated with traffic growth, proposed development will exacerbate the existing situation.

3.5.2 Census information has been used to estimate a percentage of traffic from this development which would route via the AQMA - this has highlighted that 42.1% will route through this key area. Applying this distribution to the two way trip rates and following development quantum, the number of trips at the AQMA can be assessed as shown in Table 3.1.

Table 3.1 Impact on AQMA

Junction	AM PEAK 750	PM PEAK 750	AM PEAK 1,958	PM PEAK 1,958
Trips at AQMA before Bradley Link	240	226	626	590
Trips at AQMA If Bradley Link is built	119	112	311	293
Total Trips from Development	569	537	1486	1402

3.5.3 As can be seen, the impact of the Site prior to Bradley Link being implemented is 240 two way trips in the AM peak and 226 two way trips in the PM peak. The impact of these trips added to a congested network is likely to be severe. An immaterial impact would be below 30 trips or less than 1% impact. This would equate to 100 dwellings being delivered prior to the link road or 200 when the link road is implemented and certainly not the 750 proposed within the note provided by Fore Consulting.



4. Site Accessibility

4.1 ACCESSIBILITY BY FOOT

4.1.1 The Site is located on the edge of the urban area and as such does not benefit from many local facilities in the vicinity. The access arrangements as described in Chapter 2 didn't include footway and cycle provision and the implementation of this would require additional third party land. As such access to the Site for pedestrians/cyclists is compromised and would lead to a car dominated unsustainable development contrary to the tests 2 and 4 (requiring sustainable development).

4.1.2 A Masterplan has been submitted as part of the proposals and this shows on Site provision of the following facilities:

- 2 X Community Centres;
- 1 X Primary School (assumed due to size);
- Shops;
- Golf Club; and
- Cricket Field and Sports Pitches.

4.1.3 In order to provide shops, community centres, sports facilities and a Primary School on Site, access for larger vehicles will be required for delivery and servicing. The Masterplan shows the shops clustered around the Lamb Cote Road access, which as demonstrated in Chapter 2 is an unacceptable arrangement as it doesn't provide any pedestrian provision facilities and it is reliant on third party land. The tracking assessments have also demonstrated that access via a standard size bus, rigid truck or an articulated vehicle isn't achievable and therefore the shops and facilities proposed on Site couldn't be serviced.

4.1.4 The provision of a primary school and shop facilities on Site would improve the current lack of local facilities, however no evidence has been provided to confirm that these are deliverable and would be commercially viable. Due to the current lack of facilities it is considered that this provision should be implemented within the first phase of development to ensure that the dwellings built can access some local facilities within a walk distance.

4.1.5 It is concluded that the potential allocation is not located in a sustainable location, which would lead to additional vehicular trips from the Site. The allocation of this Site would be contrary to local and national policy on locating development in sustainable locations as confirmed within two out of four tests within the Kirklees Local Plan Methodology statement detailed in Chapter 1. The access arrangement further restrict the opportunities to make the Site sustainable.

4.2 ACCESSIBILITY BY CYCLE

4.2.1 The Site Access Arrangement plans submitted in support of the allocation propose to remove the cycle infrastructure along Bradley Road. This is considered contrary to sustainable development and additional cycle links should be added as confirmed within the Site assessment and not removed as proposed within the access arrangements.

4.2.2 No new cycle infrastructure is proposed at either the access points or on the local highway network.



4.3 ACCESSIBILITY BY PUBLIC TRANSPORT

4.3.1 No bus services currently route along Bradley Road to the south of the Site and therefore the accessibility of the Site to bus services is restricted to the western and eastern extent of the Site. Furthermore there is no access to a rail station in close proximity to the Site.

4.3.2 An analysis has been undertaken of the walk distances and accessibility to the bus stops in vicinity of the Site. Figure 6 illustrates the walk distances from these stops and demonstrates that the vast majority (95%) of the allocation is beyond a 400m walk distance (which equates to an average 5 minute walk time) to a bus stop, whilst 62.4% of the allocation is greater than an 800m walk distance.

4.3.3 It is therefore concluded that the proposed Site is not accessible by public transport with no local access to rail services and limited access to bus services on the eastern and western extents of the Site.

4.3.4 This is also confirmed by the WYCA accessibility assessment in March 2015 (plan attached in Appendix E) which has categorised the Site as either upper threshold or not accessible for the majority of accessibility criteria.

4.3.5 As part of the report dated March 2016 by Fore Consulting, an assessment was produced on the walk distances to an extended 328 service through the Site. The arrangement as proposed is not considered appropriate for the following reasons:

- The two accesses proposed onto Bradley Road are not suitable as a bus route without acquiring third party land;
- Any diversion of this bus service would need to route through the entire allocation from the potential Bradley Link to the potential J24A junction - this would increase the current route length and time;
- The Fore Consulting assessment used straight line distances, ignoring development blocks and therefore overestimates the accessibility of the Site;
- The assessment by Fore Consulting shows that parts of the Site are not within the 400m walking distance, despite the overly optimistic straight line walking distances; and
- No confirmation has been provided that there is sufficient headroom in the 328 Bus service to allow an extension of the route. From an initial inspection of the timetable there doesn't appear to be headroom to include the loop without a change to the service, which would require additional buses in order to maintain the current frequency.

4.4 MODE SPLIT

4.4.1 Due to the limited local access to facilities and public transport from the development Site it can be concluded that the Site is unsustainable and that the vast majority of trips from the Site would be vehicular based. In order to ratify this conclusion a review of the existing mode split for the area surrounding the Site has been undertaken. A summary of the mode split results is shown in Table 4.1 and attached in Appendix F.



Table 4.1 Existing Mode Split

Mode	Combined Central Area*		Kirklees Authority		Yorkshire and Humber	
	Count	Percentage	Count	Percentage	Count	Percentage
Work Mainly at or From Home	22	3.8%	8564	4.5%	110962	4.6%
Underground, Metro, Light Rail, Tram	1	0.2%	155	0.1%	10716	0.4%
Train	15	2.6%	5421	2.8%	58307	2.4%
Bus, Minibus or Coach	19	3.3%	15134	7.9%	207114	8.6%
Taxi	2	0.3%	1727	0.9%	16432	0.7%
Motorcycle, Scooter or Moped	0	0.0%	1280	0.7%	16173	0.7%
Driving a Car or Van	465	79.8%	125678	65.6%	1490020	61.7%
Passenger in a Car or Van	31	5.3%	12566	6.6%	155856	6.5%
Bicycle	5	0.9%	1829	1.0%	62119	2.6%
On Foot	23	3.9%	19083	10.0%	285542	11.8%
Total	583	100%	191437	100%	2413241	100%

*Areas E00055948, E00055944 and E00055951

4.4.2 Table 4.1 shows that the existing car driver mode split in the output area immediately surrounding the potential allocation is 79.8% which is significantly higher than the 65.5% average for the Kirklees Authority and the 61.7% average in the Yorkshire and the Humber region.

4.4.3 As confirmed within the accessibility analysis in this report and by the WYCA there are limited local facilities or bus services in the area and therefore the majority of journeys to work will be via the car.

4.4.4 The mode split via walking is some 3.9% which is some 6.1% lower than the average for Kirklees (10.0%) whilst the bus mode split is 3.3% which is 4.6% lower than the Kirklees average of 7.9%. This demonstrates that the proposed allocation is in an unsustainable location.

4.4.5 This has demonstrated that the proposed potential allocation is located in an unsustainable area and is contrary to local and national policy.

4.5 ACCESSIBILITY SUMMARY

4.5.1 An assessment of the accesses proposed by Fore Consulting has shown that they are unsuitable for bus access in accordance with the West Yorkshire Design Guide and therefore the majority of the Site would be beyond a reasonable walking distance. The access arrangements have also been shown to be unsuitable for commercial vehicles and therefore the proposed provision of shops/facilities on site is undeliverable. Without the option for an extension of a bus service or for on-site facilities the Site would remain as not accessible as confirmed by the WYCA assessment and would not be sustainable development as confirmed in test 2 and 4.



5. Summary and Conclusions

5.1.1 This report has reviewed the documentation supporting Sites H1747 and H351, which have been put forward as preferred Sites within Kirklees Draft Local Plan. The Draft Local Plan confirms that the Sites combined could provide 1,958 new dwellings. Two reports have been submitted by Fore Consulting which review the Site access arrangements to the Site and this report has reviewed the access proposals put forward in terms of delivery, highway safety, highway capacity and impact on Site sustainability.

5.1.2 The Fore Consulting reports identify that four access points are appropriate to serve the circa 2,000 dwellings. A left in/out arrangement onto Bradford Road, two signalised junctions onto Bradley Road and a connection to the potential Bradley Link. The report concludes that up to 750 units could be served from the Bradford Road/Bradley Road junctions, whilst the remainder of the Site would be served from the potential Bradley Link Road. Fore Consulting confirmed that all the accesses would require third party land and as such there is no certainty that any of these junctions could be delivered.

5.1.3 The minimum standard of road for developments of over 400 dwellings and serving as a bus route is 7.3m in accordance with the West Yorkshire Design Guide. At least two of the four accesses proposed would need to be provided with this minimum requirement in order to have bus penetration of the Site.

5.1.4 This report has demonstrated that there are fundamental issues with each of the four access proposals. A development of this scale would require all four junctions to be provided with sufficient size and capacity to cater for any commercial uses, the anticipated quantum of trips and any future bus route provision. The key issues associated with each access is detailed below.

Bradford Road Left In/Left Out

- Visibility for vehicles exiting the Site is restricted by a crest in the road - a visibility requirement of 160m is required which doesn't appear to be achievable - If the vertical visibility in this location is not improved it would cause be a highway safety issue;
- No right turn into or out of Site has been provided - This is likely to cause unsafe u turning manoeuvres if the current central reserve break for right turn into Dorchester Road is retained. If removed, this will add additional pressure onto the already congested Bradley Bar Roundabout by increasing the number of u-turning movements;
- Northbound buses on the A641 would be unable to route into the Site, contrary to the statement in Section 6.3 of the Fore Report (V1.0) which advocates buses diverting into the Site;
- Land ownership restricts delivery;
- No capacity assessment provided to demonstrate that access would work with and without flows associated with J24A; and
- Inadequate footway/cycleway provision.

5.1.5 The proposed access in this location would not be suitable due to the limited vertical visibility to the right (north) when exiting the Site causing a highway safety concern. The other issues highlighted further prevent any access in this location due to concerns over highway safety, capacity, bus penetration and land ownership.



Lamb Cote Road/Bradley Road

- The arrangement proposes to shorten an existing right turn lane into the public house. This proposal is unsafe and contrary to highway design guidance and would be raised as a major issue within a road safety audit. A solution to this highway safety issue cannot be resolved within the adopted highway boundary or the allocation boundary for a full movements junction;
- The design shown requires third party land (No. 332 Bradley Road) and is therefore not deliverable, furthermore the width of carriageway is not sufficient to accommodate the bus route for a development of over 400 dwellings;
- A swept path analysis shows large vehicles aren't able to left turn into or out of the Site and therefore the servicing requirements of the Site cannot be completed;
- The XY capacity analysis shows that the junction would operate significantly above capacity causing severe congestion on the network - the modelling completed by Fore Consulting is flawed;
- Access to No. 334 Bradley Road is restricted by the proposed secondary signal head; and
- Inadequate footway/cycle provision including loss of Bradley Road Cycle Lanes.

5.1.6 A full movement's access in this location isn't achievable. The junction separation between Lamb Cote Road and the Public House cannot be resolved within the adopted highway or within the allocation boundary. The current bus route strategy and the local centre servicing are reliant on this access and these elements could also not be delivered.

Tithe House Lane/Bradley Road

- The proposed access arrangements require third party land and is therefore not deliverable, furthermore the width of carriageway is not sufficient to accommodate the bus route for a development of over 400 dwellings;
- A swept path analysis shows large vehicles aren't able to left turn into or out of the Site and therefore the servicing requirements of the Site cannot be completed;
- The XY capacity analysis shows that the junction would operate significantly above capacity causing severe congestion on the network - the modelling completed by Fore Consulting is flawed; and
- Inadequate footway/cycle provision including loss of Bradley Road Cycle Lanes.

5.1.7 Given the constraints above, an appropriate access to serve this quantum of development in this location isn't achievable without third party land and the widening of the Bradley Lane Corridor to allow for additional through lanes and the retention of the existing cycle lanes on Bradley Road.

Potential Connection to Potential Bradley Link Road

5.1.8 Funding is currently available through the WYTF to deliver an improvement in the Cooper Bridge area, however the precise scheme is unknown at this stage and the provision of a Bradley Link Road is only one of several options under consideration. As such there is no guarantee for delivery of the link road which is acknowledged by Fore Consulting.

5.1.9 If funding was secured for the scheme, no details are available on when the scheme could be delivered and whether it is feasible to provide a connection into the Site. As confirmed by Fore Consulting the proposed development quantum is reliant on this scheme coming forward.



Potential Access onto J24A

5.1.10 The Fore Consulting reports also suggest that there is potential to provide improved access once the M62 J24A access is built to the northwest of the Site. The ability to access this junction will be subject to acquiring third party land, gaining approval from Highways England and an assessment of capacity and therefore cannot be relied upon as a potential access into the Site.

Access Arrangement Summary

5.1.11 Two of the proposed access arrangements (Bradford Rd and Lamb Cote Road) proposed by Fore Consulting have highway safety concerns which restrict the opportunity for access in these locations. The third access from Tithe House Way has land ownership and capacity constraints which would need to be overcome. As such the delivery of the Site is wholly reliant on an access from Bradley Link and from J24A in order to achieve at least three access points. Neither of these schemes are certain to come forward, making the development uncertain to be deliverable.

Off Site Impact

5.1.12 This report has demonstrated that the development will have a large impact at the Cooper Bridge AQMA, whilst the modelling shows that the proposed junctions onto Bradley Road would have a severe impact on traffic flows.

Sustainable Development

5.1.13 The Site is considered to be located in an unsustainable location with very limited access to public transport and very few local services as confirmed by WYCA. The previous Optima report demonstrated that:

- No local shopping centre is located within a 10 minute walk distance of the potential allocation. The nearest centre (Cophthorn Gardens/Keldergate) is some 25 minute walk from the centre of the Site which is over twice the distance as recommended in MfS. Due to the distance from a local shopping centre, local walking trips will be replaced by additional vehicular trips;
- Providing for journeys on Foot confirms in Table 3.2 that the Desirable/Acceptable and Maximum recommended distance to a school is 500m, 1,000m and 2,000m. No primary schools are within 500m or 1,000m and the nearest primary school (St Thomas) is located a 25 minute (2,000m) walk distance from the Site. This walk would include crossing Bradley Road and it is not considered many will walk to this facility; and
- All Saints Catholic College is located just over the acceptable walking distance to a school as indicated within 'Providing for journeys on Foot'. There is no current controlled crossing facility at the frontage of the Site and if the Site was developed, a crossing facility to this school should be provided. No other secondary school is within walking distance of the Site.
- The vast majority (95%) of the allocation is beyond a 400m walk distance to a bus stop, whilst 62.4% of the Site is greater than an 800m walk distance.

5.1.14 A review of the Site Accesses and Public Transport Strategy has resulted in the following conclusions:

- Bus Penetration of the Site is reliant on links from J24A and the Bradley Link which might not be brought forward as the access proposals are not suitable;



- The proposed Local Centre and Primary School on Site provision is reliant on an access from Bradley link or J24A which might not be brought forward; and
- The proposed bus extension is undeliverable due to the access proposals, whilst from an assessment of the service headroom, there is little opportunity to increase the existing route length.

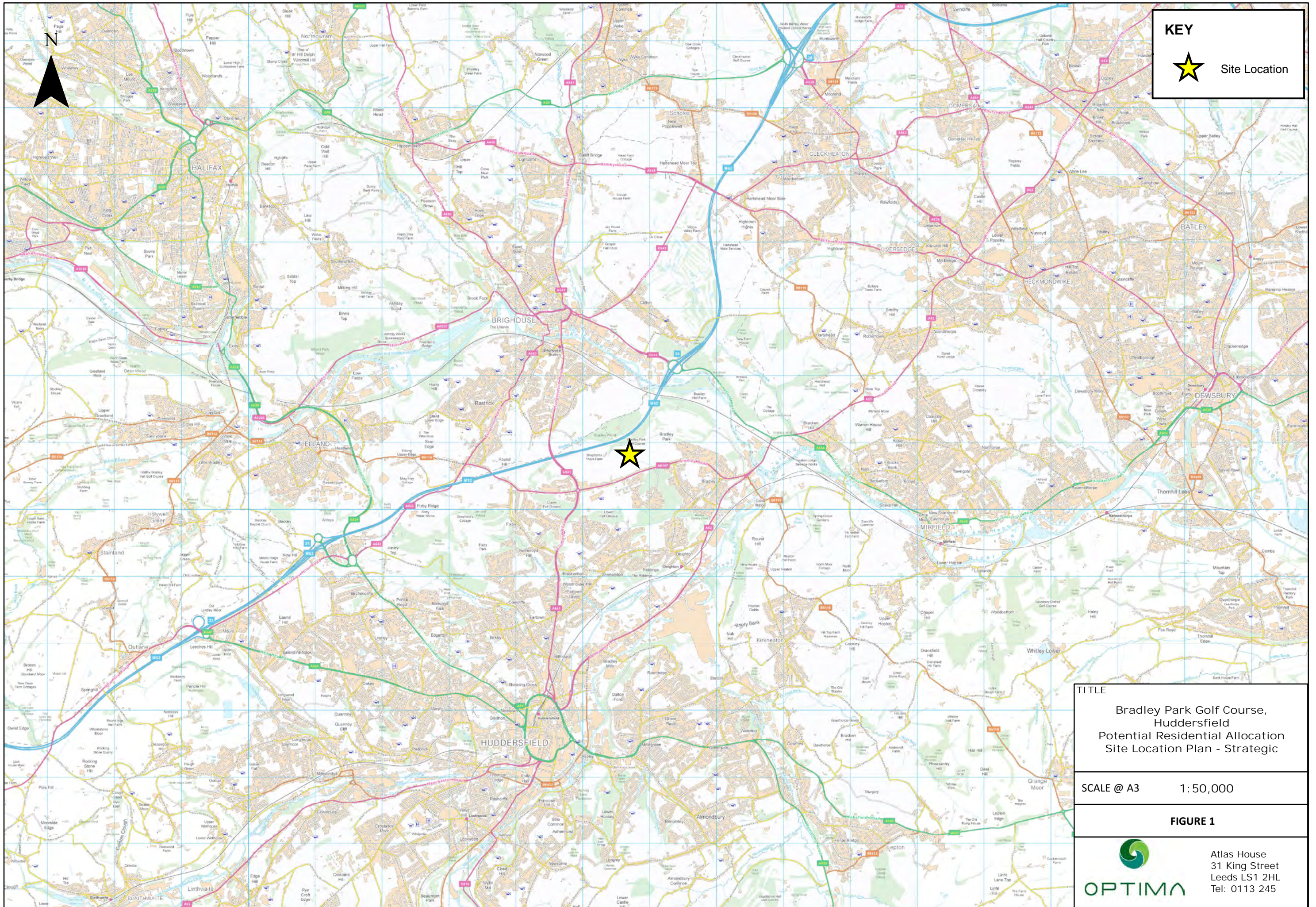
5.1.15 It is therefore concluded that the potential allocation is not located in a sustainable location and this has been confirmed by a review of the 2011 census mode split information for the area surrounding the Site which confirmed that 79.8% travel to work by car compared to the Kirklees Authority average of 65.5%. The allocation of this Site would therefore be contrary to policy on locating development in sustainable locations.

5.1.16 This report has concluded that the allocation access arrangements proposed by Fore Consulting are undeliverable as they require third party land, create several highway safety concerns, don't provide sufficient highway capacity and don't incorporate appropriate pedestrian/cycle/public transport access. The Site is therefore reliant on the potential accesses from Bradley Link and J24A and there is no certainty that these would be delivered within the plan period and there is no guarantee whether the improvements would facilitate direct access to these allocations. Additionally the Site has been assessed by WYCA as located in an unsustainable location and access for public transport and servicing cannot be achieved to improve this assessment. The combination of these failings would result in a severe impact on the local highway network.



Figures





KEY


 Site Location

TITLE

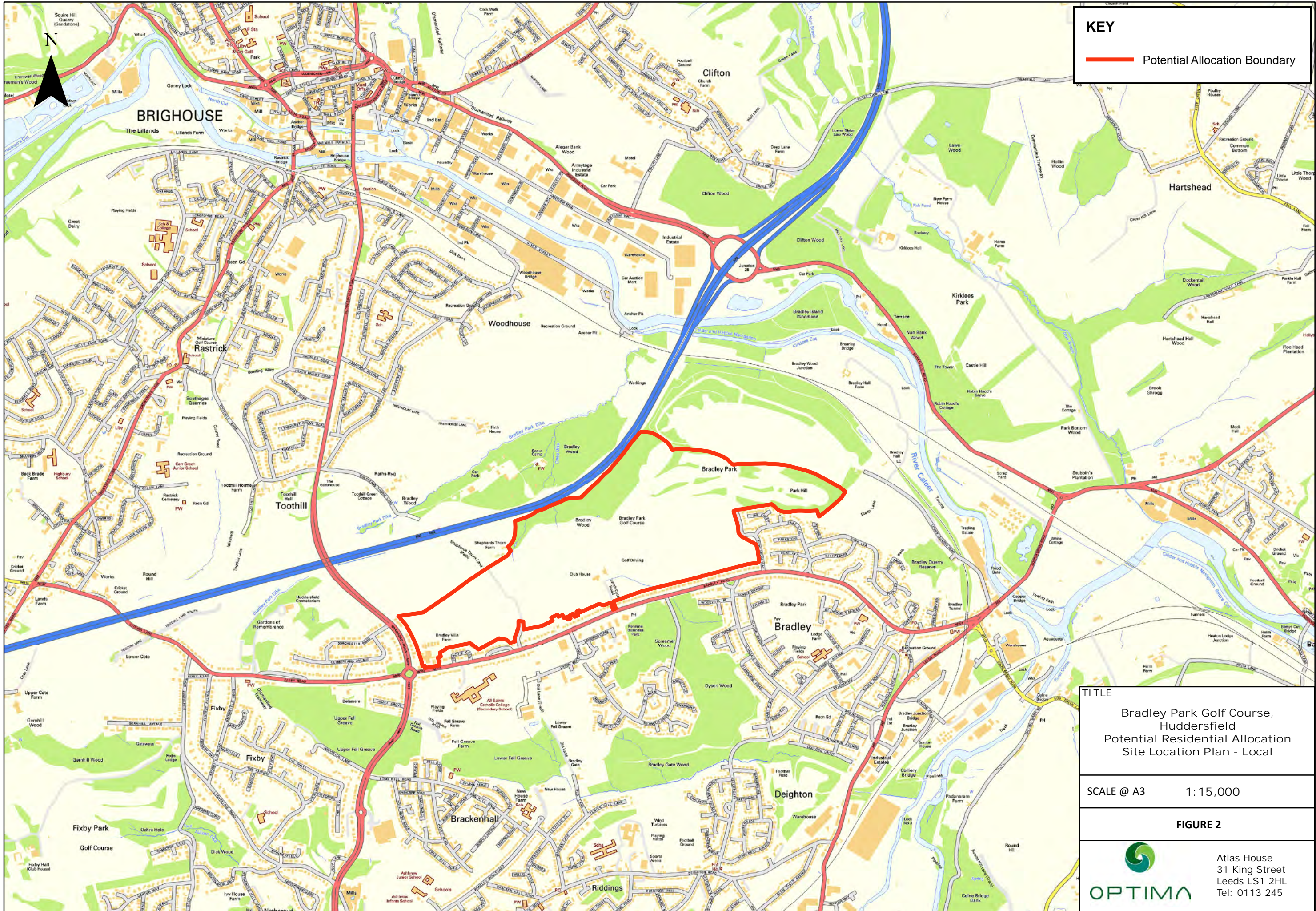
Bradley Park Golf Course,
Huddersfield
Potential Residential Allocation
Site Location Plan - Strategic

SCALE @ A3 1:50,000

FIGURE 1



Atlas House
31 King Street
Leeds LS1 2HL
Tel: 0113 245



KEY

— Potential Allocation Boundary

TITLE

Bradley Park Golf Course,
Huddersfield
Potential Residential Allocation
Site Location Plan - Local

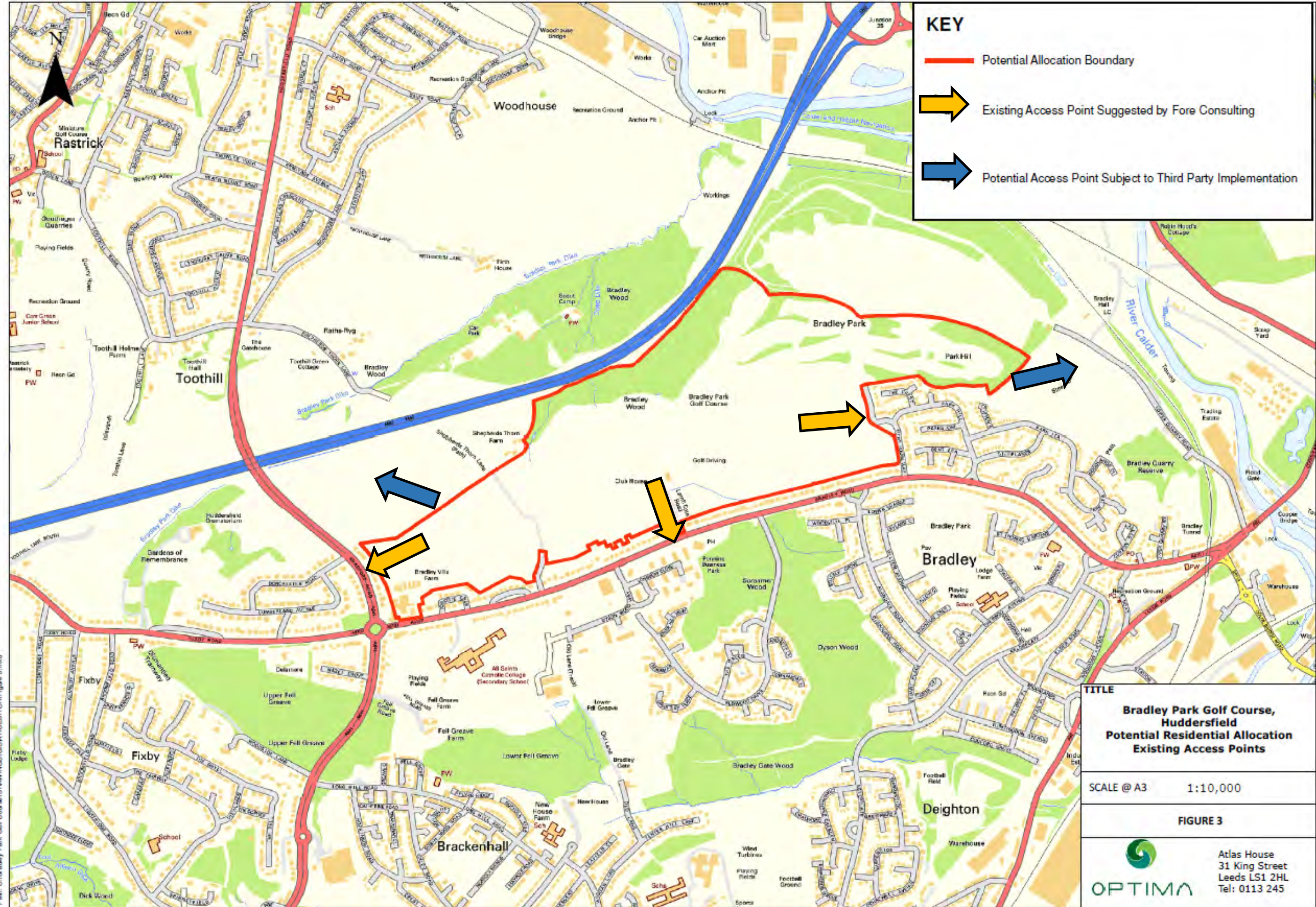
SCALE @ A3 1:15,000

FIGURE 2



Atlas House
31 King Street
Leeds LS1 2HL
Tel: 0113 245

Path: O:\Bradley Park Golf Course\DRAWINGS\GIS\ARCEDITOR\Site Location - Local.mxd




KEY

- Potential Allocation Boundary
- ➔ Existing Access Point Suggested by Fore Consulting
- ➔ Potential Access Point Subject to Third Party Implementation

TITLE
Bradley Park Golf Course, Huddersfield
Potential Residential Allocation
Existing Access Points

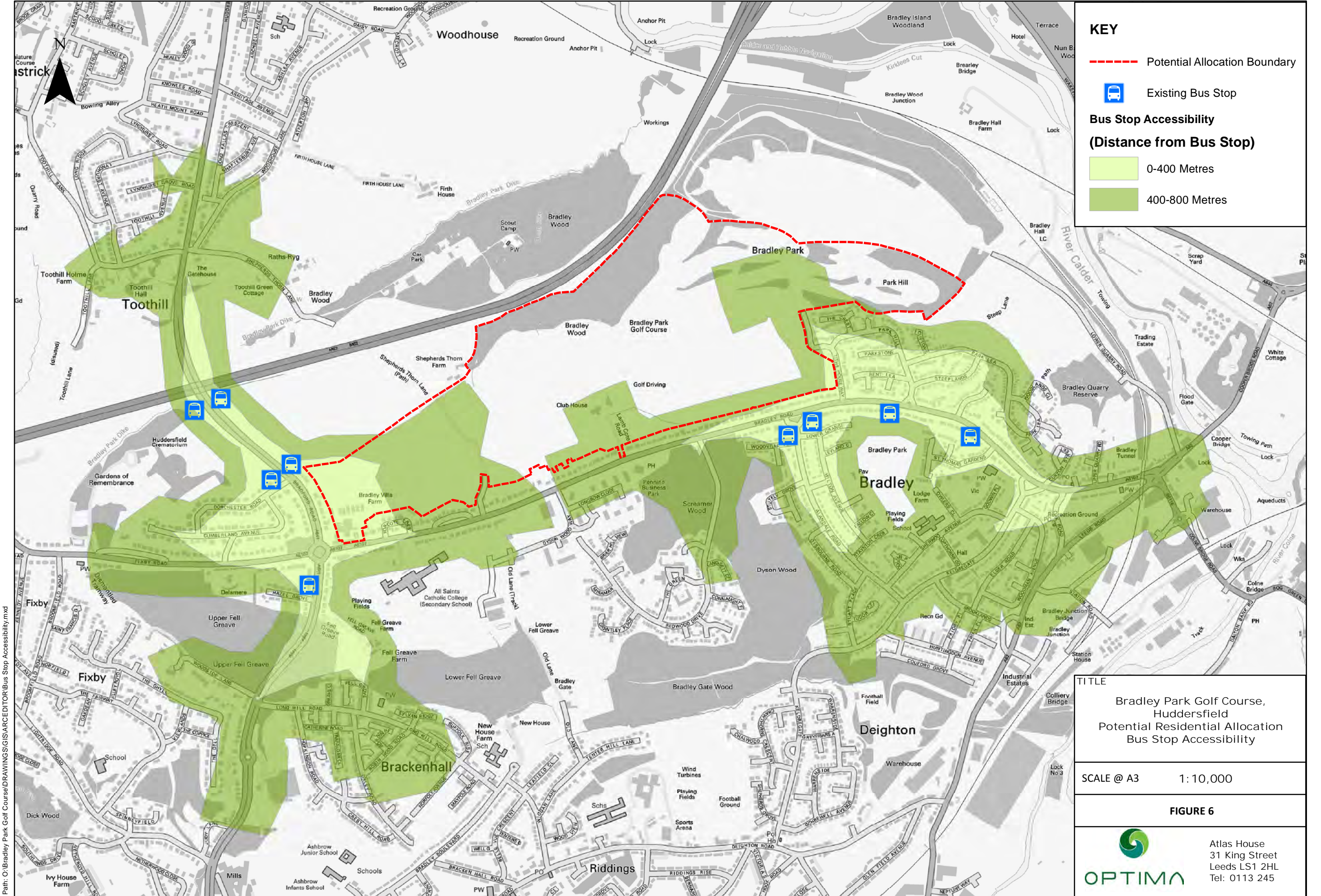
SCALE @ A3 1:10,000

FIGURE 3



Atlas House
 31 King Street
 Leeds LS1 2HL
 Tel: 0113 245

Path: C:\Bradley Park Golf Course\DRAWINGS\GIS\EDITOR\Figure 3.mxd



KEY

- - - Potential Allocation Boundary
- Existing Bus Stop

**Bus Stop Accessibility
(Distance from Bus Stop)**

- 0-400 Metres
- 400-800 Metres

TITLE

Bradley Park Golf Course,
Huddersfield
Potential Residential Allocation
Bus Stop Accessibility

SCALE @ A3 1: 10,000

FIGURE 6

Atlas House
31 King Street
Leeds LS1 2HL
Tel: 0113 245

Appendices

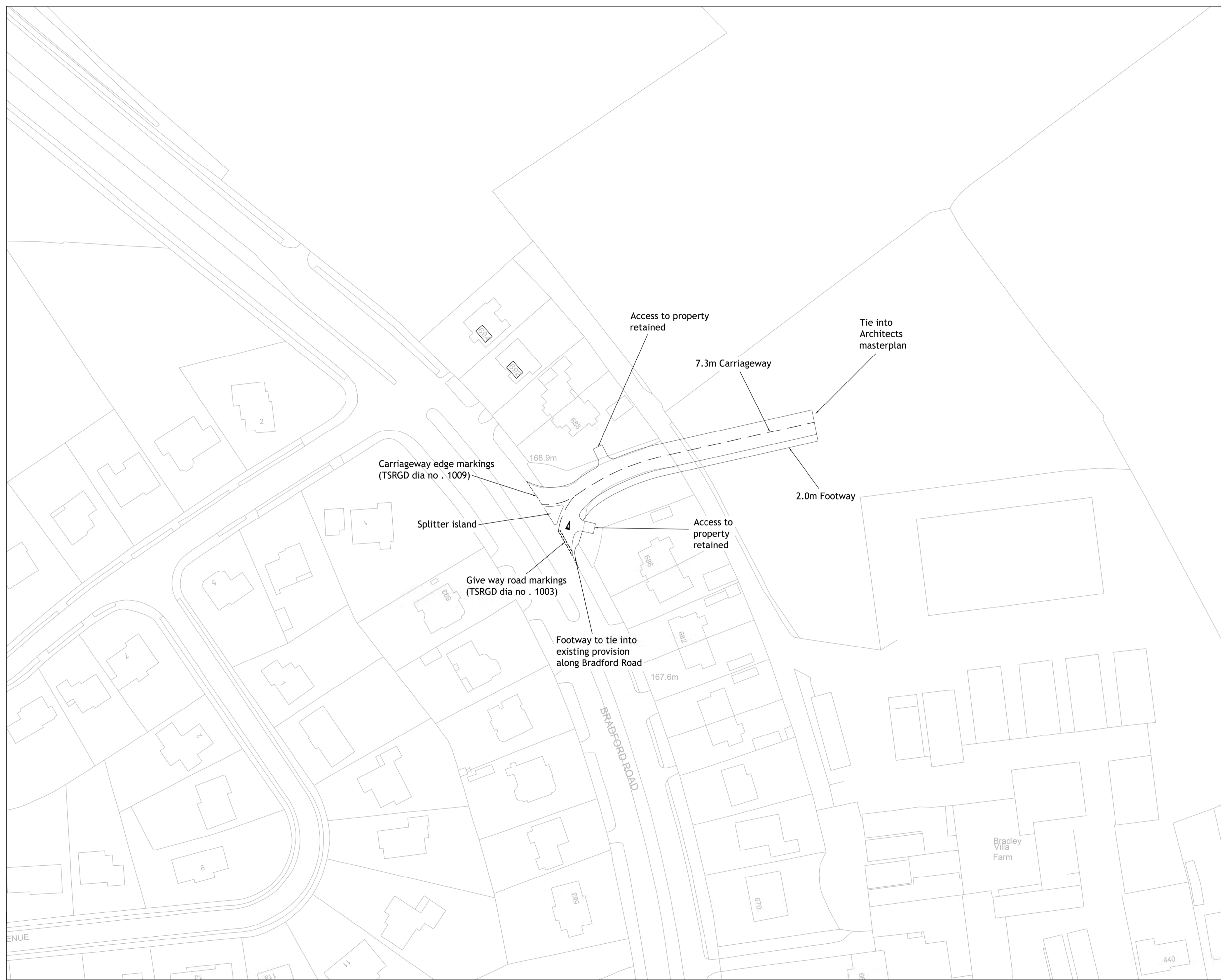


Appendix A Fore Consulting Potential Access Arrangements



DO NOT SCALE

NOTES



REV	DESCRIPTION	DATE	BY

Client:
Kirklees Council

Project:
Bradley Masterplanning

Drawing Title:
Potential Site Access
Bradford Road

Fore Consulting Limited
 2nd Floor, Queens House
 34 Wellington Street
 Leeds
 LS1 2DE
 0113 2460004
 enquiries@foreconsulting.co.uk
 www.foreconsulting.co.uk



Drawn by	Checked by	Date	Scale	Format
PJ	PI	2016	1:500	A1

Job Number	Drawing Number	Revision
3367	3367 SK001 01	-

DO NOT SCALE

NOTES



REV	DESCRIPTION	DATE	BY

Client:
Kirklees Council

Project:
Bradley Masterplanning

Drawing Title:
Potential Site Access
Bradley Road

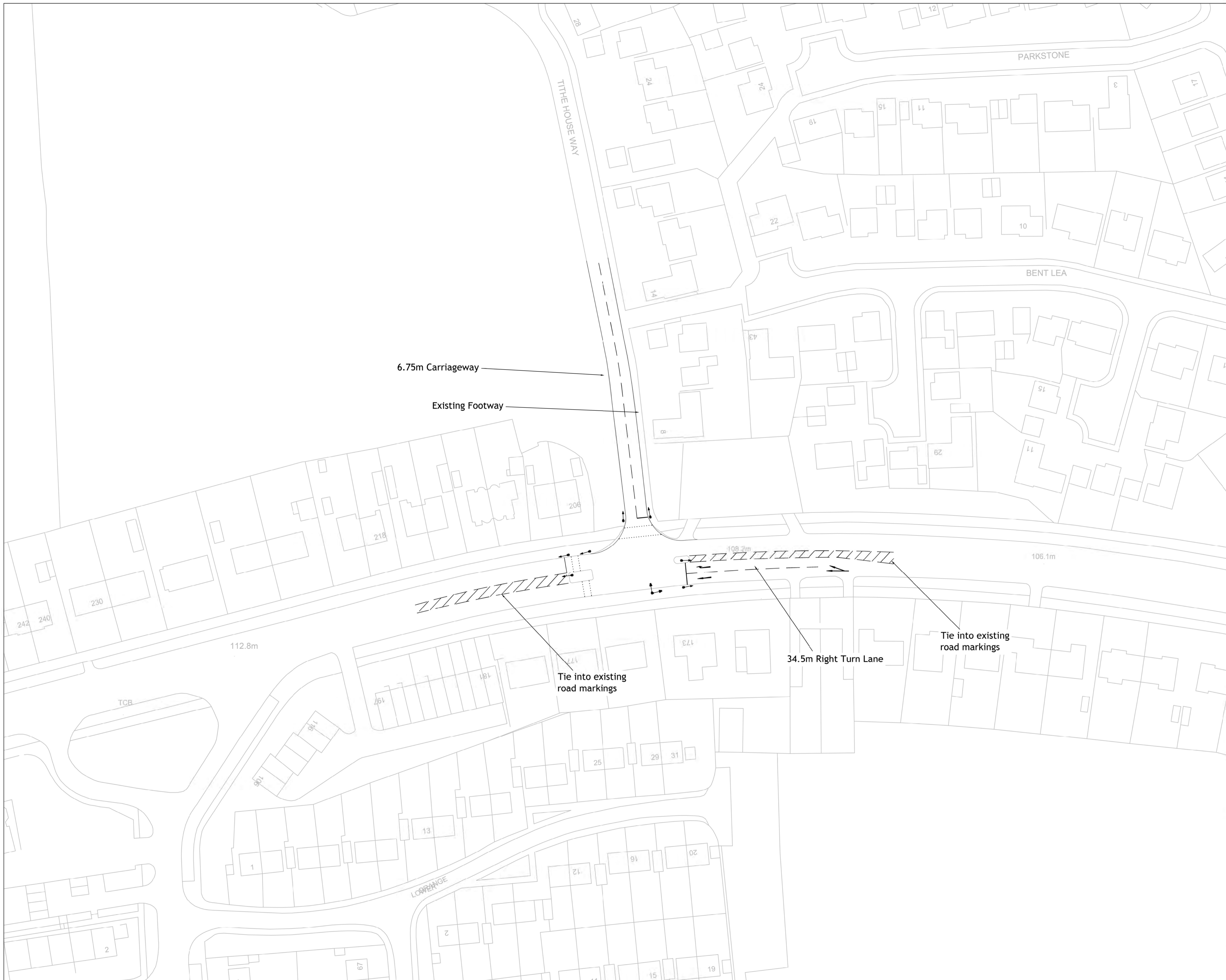
Fore Consulting Limited
 2nd Floor, Queens House
 34 Wellington Street
 Leeds
 LS1 2DE
 0113 246004
 enquiries@foreconsulting.co.uk
 www.foreconsulting.co.uk



Drawn by	Checked by	Date	Scale	Format
PJ	PI	2016	1:500	A1
Job Number	Drawing Number	Revision		
3367	3367 SK001 02	-		

DO NOT SCALE

NOTES



REV	DESCRIPTION	DATE	BY

Client:
Kirklees Council

Project:
Bradley Masterplanning

Drawing Title:
Potential Site Access
Bradley Road

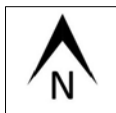
Fore Consulting Limited
 2nd Floor, Queens House
 34 Wellington Street
 Leeds
 LS1 2DE
 0113 246004
 enquiries@foreconsulting.co.uk
 www.foreconsulting.co.uk



Drawn by	Checked by	Date	Scale	Format
PJ	PI	2016	1:500	A1
Job Number	Drawing Number			Revision
3367	3367 SK001 02			-

Appendix B Optima Review of Fore Consulting Access Arrangements





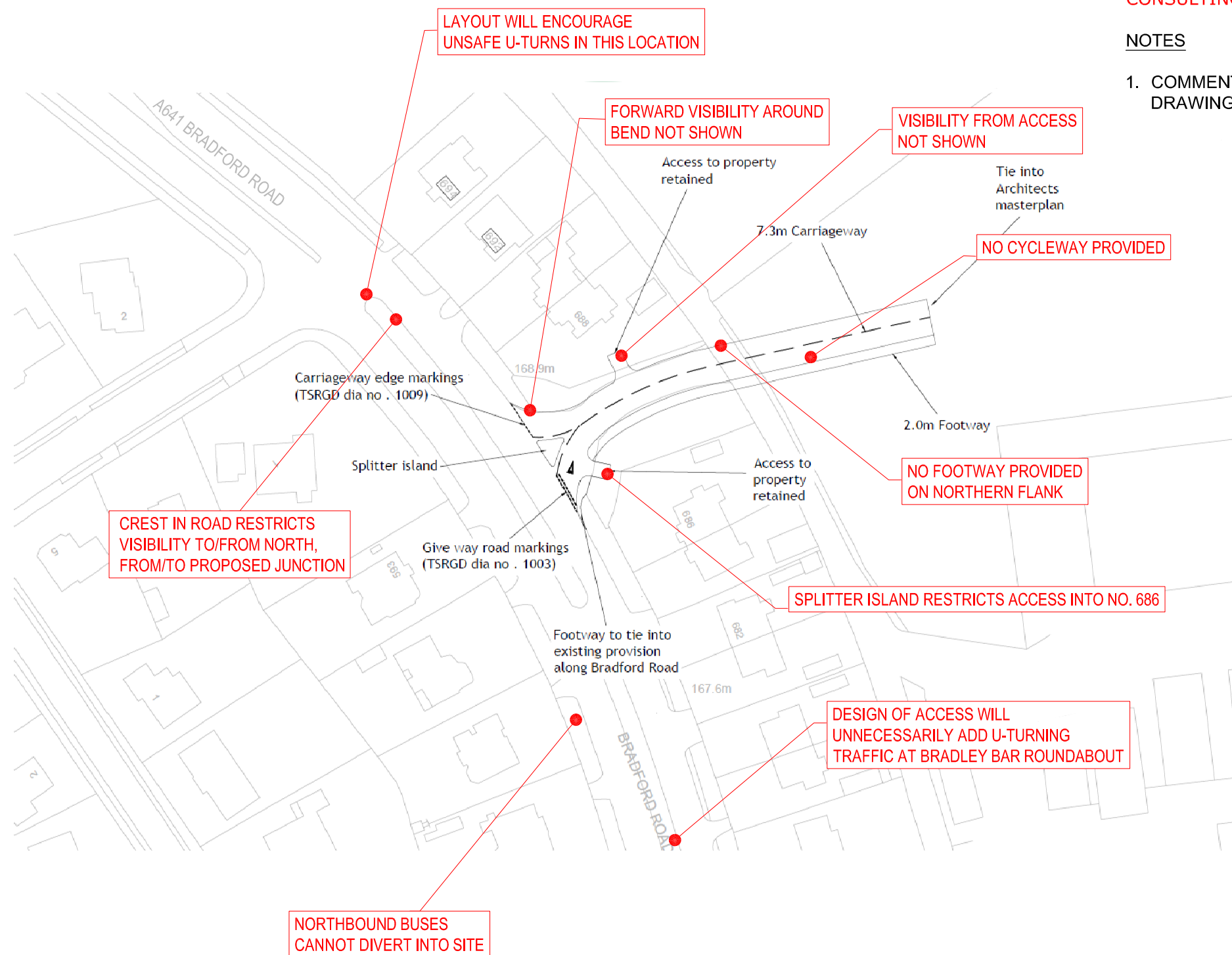
KEY

FORE CONSULTING DRAWING NOTES.

OPTIMA HIGHWAYS COMMENTS ON FORE CONSULTING DRAWING

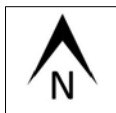
NOTES

1. COMMENTS PROVIDED ON FORE CONSULTING DRAWING NUMBER: 3363 SK001 01



PROJECT						CLIENT			
BRADLEY PARK GOLF COURSE, HUDDERSFIELD						THORNHILL ESTATES			
DRAWING TITLE						CHECKED	APPROVED	DRG No.	
OPTIMA COMMENTS ON A641 BRADFORD ROAD POTENTIAL ACCESS						SJP	SJP	15117/IN/06	
STATUS						DRAWN BY:	SCALE @ A3	DATE	REV.
PRELIMINARY						NJ	1:1000	01/09/17	





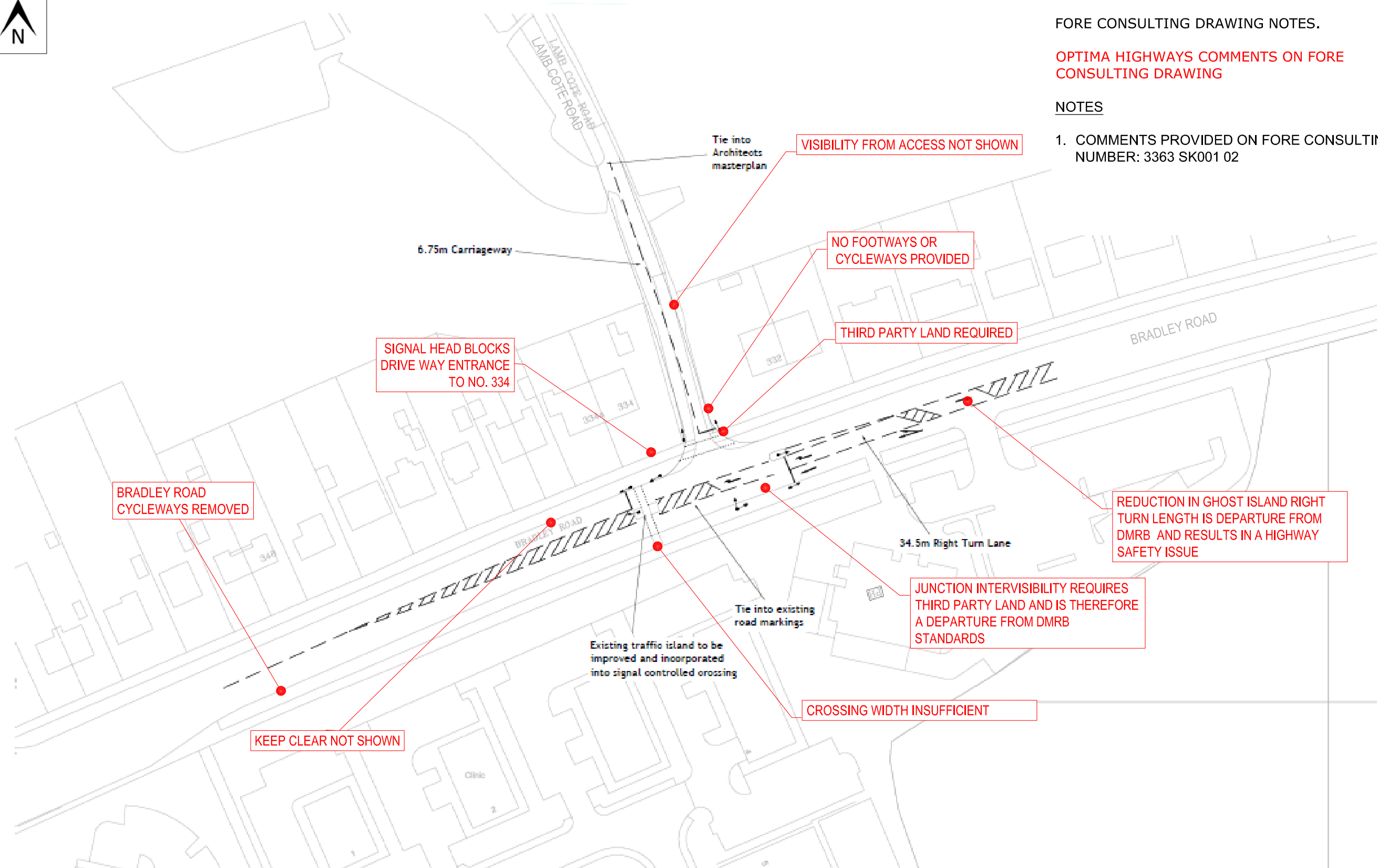
KEY

FORE CONSULTING DRAWING NOTES.

OPTIMA HIGHWAYS COMMENTS ON FORE CONSULTING DRAWING

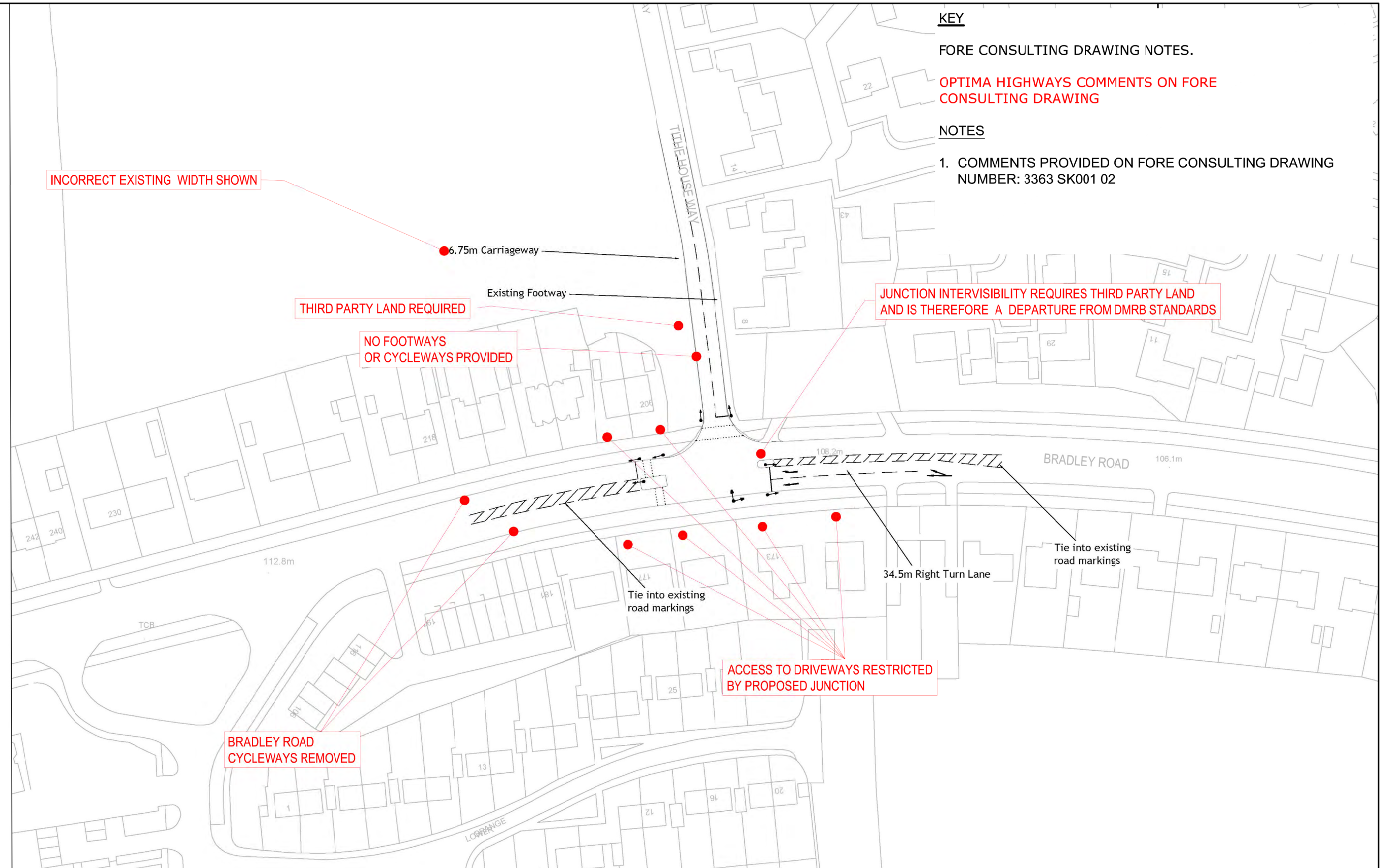
NOTES

1. COMMENTS PROVIDED ON FORE CONSULTING DRAWING NUMBER: 3363 SK001 02



						PROJECT BRADLEY PARK GOLF COURSE, HUDDERSFIELD	CLIENT THORNHILL ESTATES			
REV	DATE	BY	DESCRIPTION	CHK	APP	DRAWING TITLE OPTIMA COMMENTS ON LAMB COTE ROAD POTENTIAL ACCESS	CHECKED SJP	APPROVED SJP	DRG No. 15117/IN/07	
STATUS PRELIMINARY							DRAWN BY: NJ	SCALE @ A3 1:1000	DATE 01/09/17	REV.

Intelligent Highways Solutions
Atlas House, 31 King Street, Leeds, LS1 2HL
T 0113 245 1679 F 0113 245 9042



KEY

FORE CONSULTING DRAWING NOTES.

OPTIMA HIGHWAYS COMMENTS ON FORE CONSULTING DRAWING

NOTES

1. COMMENTS PROVIDED ON FORE CONSULTING DRAWING NUMBER: 3363 SK001 02

PROJECT						CLIENT			
BRADLEY PARK GOLF COURSE, HUDDERSFIELD						THORNHILL ESTATES			
DRAWING TITLE						CHECKED	APPROVED	DRG No.	
OPTIMA COMMENTS ON TITHE HOUSE WAY POTENTIAL ACCESS						SJP	SJP	15117/IN/08	
STATUS						DRAWN BY:	SCALE @ A3	DATE	REV.
PRELIMINARY						NJ	1:1000	01/09/17	

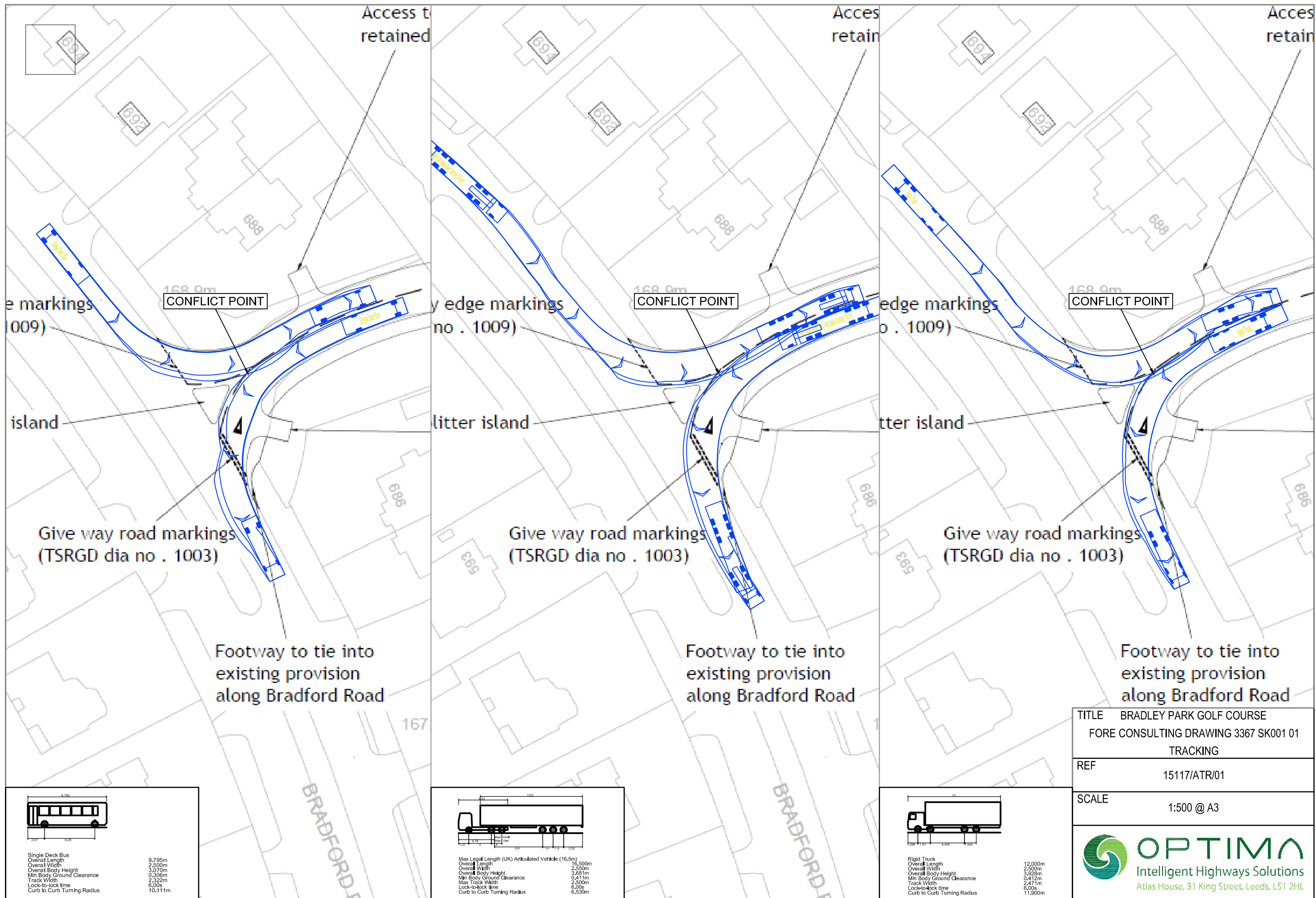


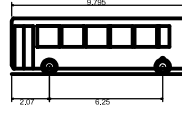
OPTIMA

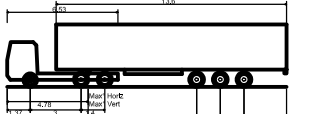
Intelligent Highways Solutions
 Atlas House, 31 King Street, Leeds, LS1 2HL
 T 0113 245 1679 F 0113 245 9042

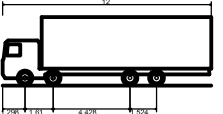
Appendix C Swept Path Analysis of Fore Consulting Access Arrangements





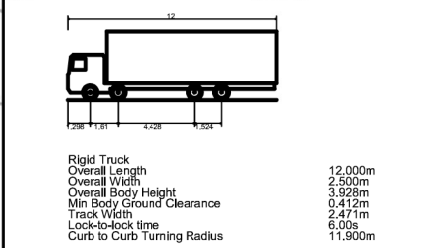
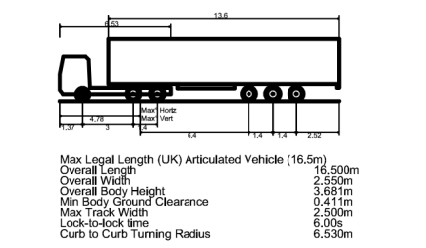
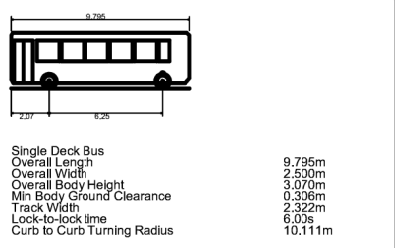
	
Single Deck Bus	9.795m
Overall Length	2.500m
Overall Width	3.070m
Overall Body Height	0.306m
Min Body Ground Clearance	2.322m
Track Width	6.00s
Lock-to-lock time	10.111m
Curb to Curb Turning Radius	

	
Max Legal Length (UK) Articulated Vehicle (16.5m)	16.500m
Overall Length	2.550m
Overall Width	3.881m
Overall Body Height	0.411m
Min Body Ground Clearance	2.500m
Max Track Width	6.00s
Lock-to-lock time	6.530m
Curb to Curb Turning Radius	

	
Rigid Truck	12.000m
Overall Length	2.500m
Overall Width	3.928m
Overall Body Height	0.412m
Min Body Ground Clearance	2.471m
Track Width	6.00s
Lock-to-lock time	11.900m
Curb to Curb Turning Radius	

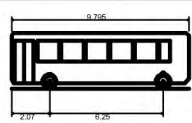
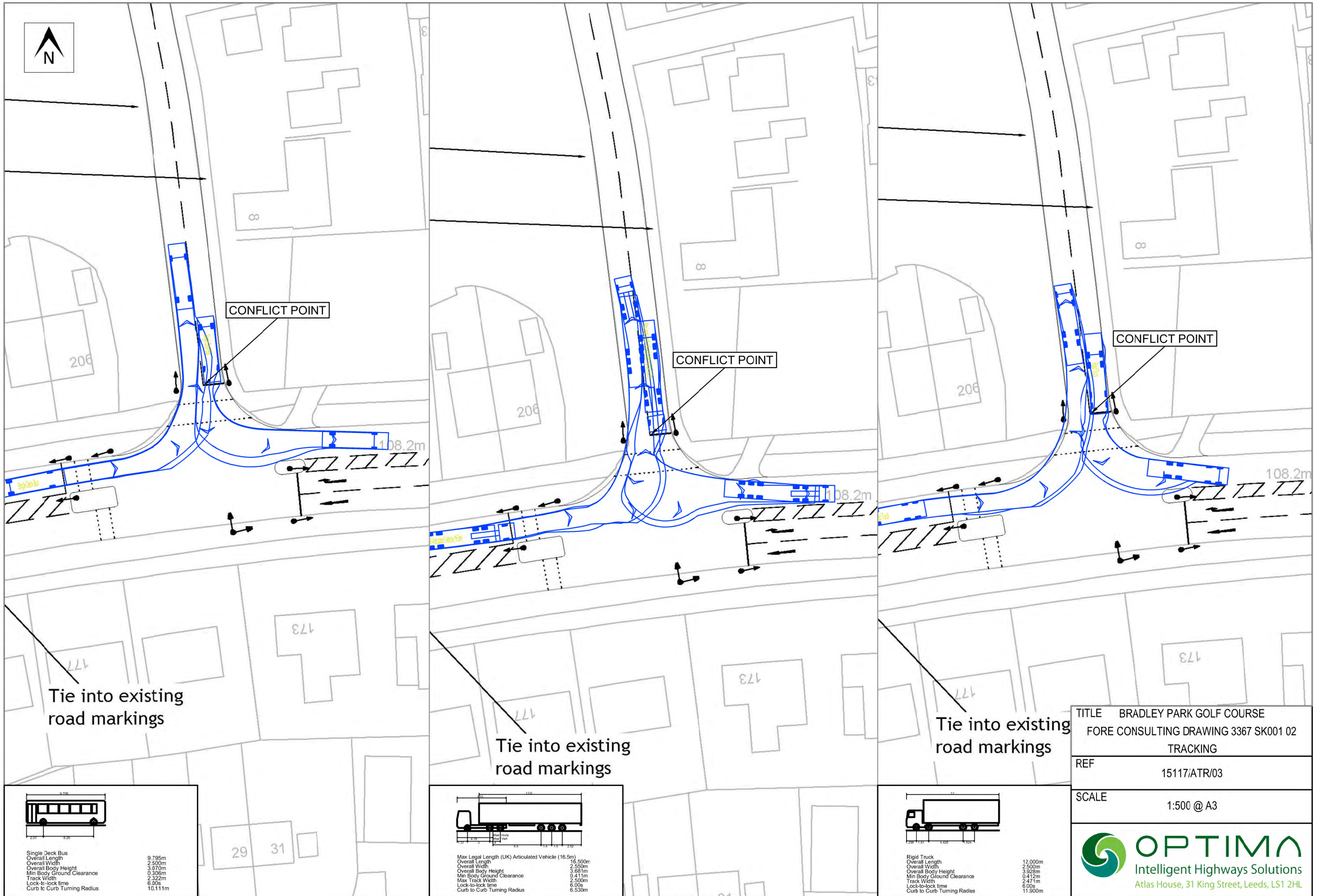
TITLE	BRADLEY PARK GOLF COURSE FORE CONSULTING DRAWING 3367 SK001 01 TRACKING
REF	15117/ATR/01
SCALE	1:500 @ A3



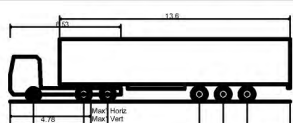


TITLE	BRADLEY PARK GOLF COURSE FORE CONSULTING DRAWING 3367 SK001 02 TRACKING
REF	15117/ATR/02
SCALE	1:500 @ A3

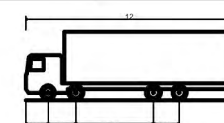




Single Deck Bus
 Overall Length 9.795m
 Overall Width 2.500m
 Overall Body Height 3.070m
 Min Body Ground Clearance 0.305m
 Track Width 2.322m
 Lock-to-lock time 6.00s
 Curb to Curb Turning Radius 10.111m



Max Legal Length (UK) Articulated Vehicle (16.5m)
 Overall Length 16.500m
 Overall Width 2.550m
 Overall Body Height 3.581m
 Min Body Ground Clearance 0.411m
 Max Track Width 2.500m
 Lock-to-lock time 6.00s
 Curb to Curb Turning Radius 6.530m



Rigid Truck
 Overall Length 12.000m
 Overall Width 2.500m
 Overall Body Height 3.928m
 Min Body Ground Clearance 0.412m
 Track Width 2.471m
 Lock-to-lock time 6.00s
 Curb to Curb Turning Radius 11.900m

TITLE BRADLEY PARK GOLF COURSE
 FORE CONSULTING DRAWING 3367 SK001 02
 TRACKING

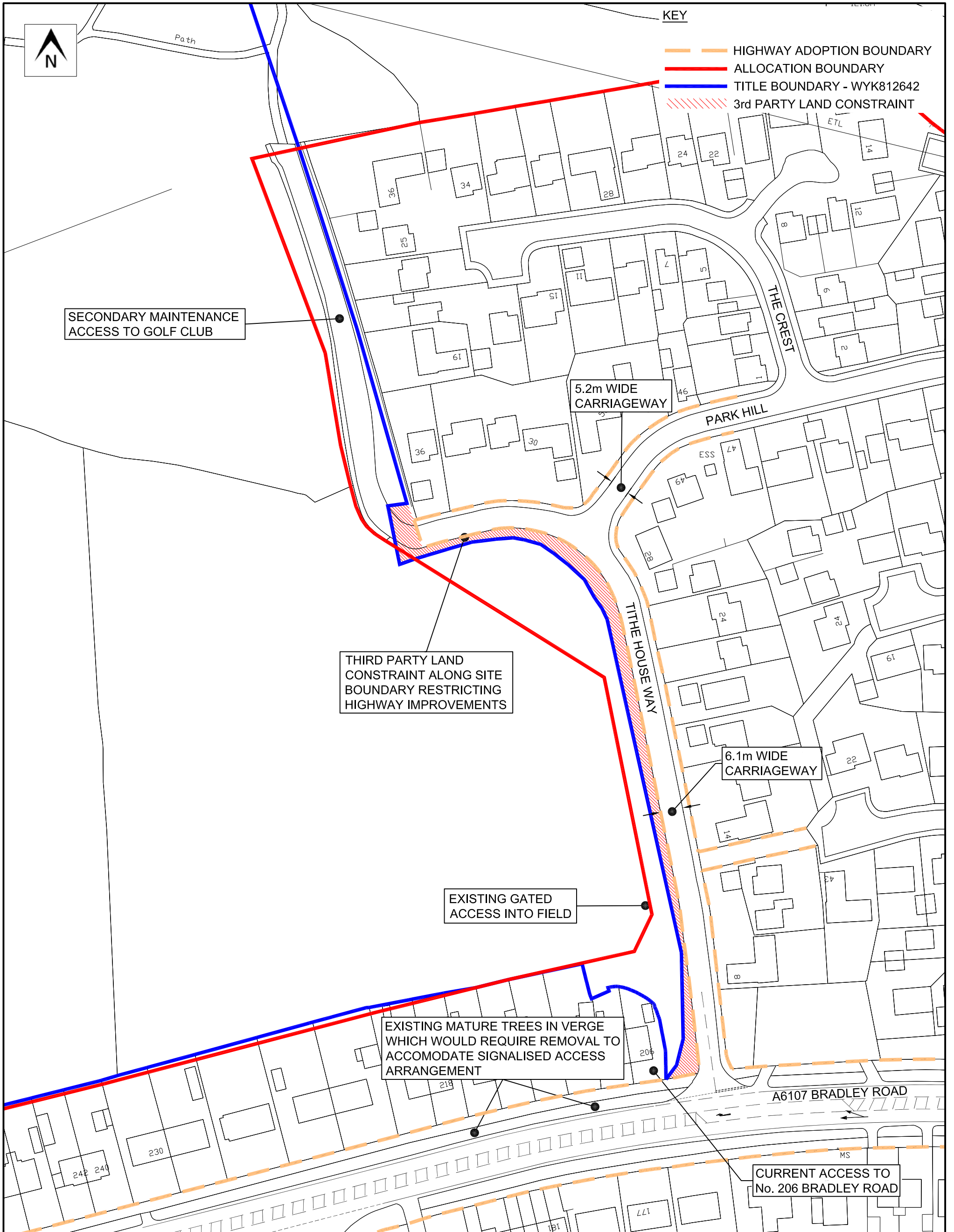
REF 15117/ATR/03

SCALE 1:500 @ A3



Appendix D Third Party Ransom Strip at Tithe House Way - Optima Drawing 15117/IN/05





A		05/01/16	TP	INITIAL ISSUE	SJP	PMO	PROJECT BRADLEY PARK GOLF COURSE, HUDDERSFIELD	CLIENT THORNHILL ESTATES			
REV	DATE	BY	DESCRIPTION	CHK	APP		DRAWING TITLE A6107 BRADLEY ROAD / TITHE HOUSE WAY EXISTING ACCESS	CHECKED SJP	APPROVED PMO	DRG No. 15117/IN/05	
STATUS								DRAWN BY: TP	SCALE @ A3 1:1,000	DATE JANUARY 2016	REV. A
INFORMATION											



OPTIMA
Intelligent Highways Solutions
Atlas House, 31 King Street, Leeds, LS1 2HL
T 0113 245 1679 F 0113 245 9042

Appendix E WYCA Accessibility Assessment



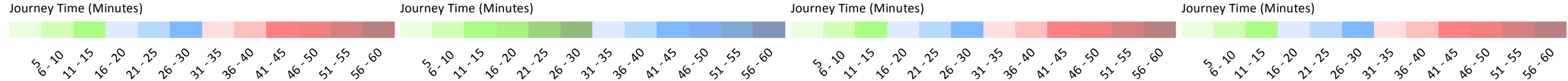
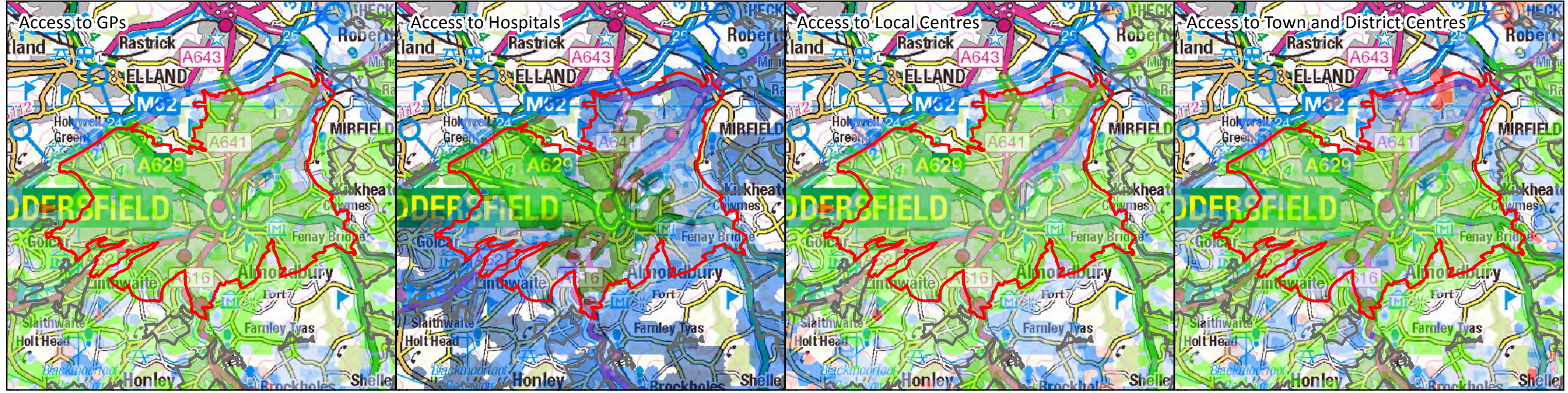
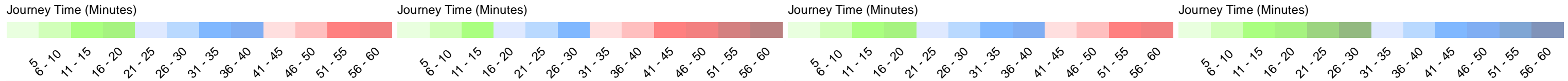
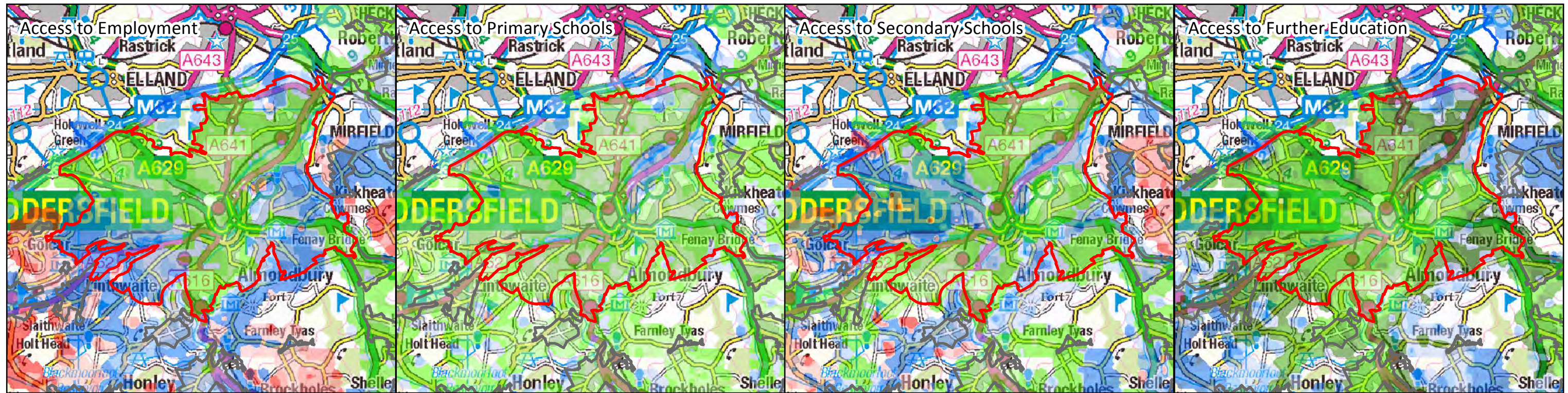
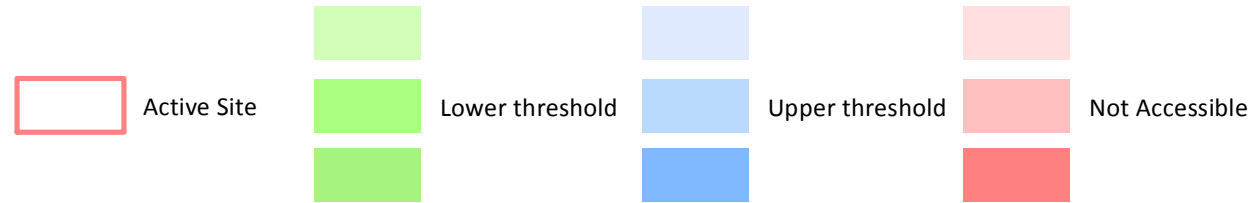
Kirklees Council Housing Allocations - Accessibility Assessments March 2015

Public Transport Journey Time Thresholds



Local Settlements: Huddersfield

The following travel time indicators are based on the travel time to reach each destination type by public transport to a maximum of 60 minutes journey time. The assessments are based on a AM peak period.



Appendix F 2011 Census Residential Mode Split



Travel to Work Mode Split from 2011 Census Data

	E00055948		E00055944		E00055951		Combined Central Area		Kirklees		Yorkshire and The Humber	
	Output Area		Output Area		Output Area				Metropolitan District		Region	
	Count	Percentage	Count	Percentage	Count	Percentage	Count	Percentage	Count	Percentage	Count	Percentage
Work Mainly at or From Home	10	4.1%	4	2.2%	8	5.0%	22	3.8%	8564	4.5%	110962	4.6%
Underground, Metro, Light Rail, Tram	1	0.4%	0	0.0%	0	0.0%	1	0.2%	155	0.1%	10716	0.4%
Train	8	3.3%	5	2.8%	2	1.3%	15	2.6%	5421	2.8%	58307	2.4%
Bus, Minibus or Coach	10	4.1%	8	4.5%	1	0.6%	19	3.3%	15134	7.9%	207114	8.6%
Taxi	1	0.4%	0	0.0%	1	0.6%	2	0.3%	1727	0.9%	16432	0.7%
Motorcycle, Scooter or Moped	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1280	0.7%	16173	0.7%
Driving a Car or Van	202	82.1%	139	78.1%	124	78.0%	465	79.8%	125678	65.6%	1490020	61.7%
Passenger in a Car or Van	7	2.8%	15	8.4%	9	5.7%	31	5.3%	12566	6.6%	155856	6.5%
Bicycle	1	0.4%	2	1.1%	2	1.3%	5	0.9%	1829	1.0%	62119	2.6%
On Foot	6	2.4%	5	2.8%	12	7.5%	23	3.9%	19083	10.0%	285542	11.8%
Total	246	100%	178	100%	159	100%	583	100%	191437	100%	2413241	100%