Sarnlea Limited
Consulting Engineers

4 & 4A Oaklands Road, Bromley, BR1 3SL

TRANSPORT ASSESSMENT

- Oaklands
- January 2015

4 & 4A Oaklands Road, Bromley, BR1 3SL

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- Oaklands
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1. Introduction

1.1 Summary

1.1.1 This Transport Assessment has been prepared by Sarnlea Limited on behalf of South East Living (SEL) in order to support the forthcoming outline planning application at 4 & 4A Oaklands Road, Bromley, BR1 3SL.

1.1.2 Outline planning permission is sought for:

"Development of 11 No one and two bedroom apartments."

1.1.3 The Transport Assessment is structured as follows:

- Section 2.0 outlines the background to the proposed development;
- Section 3.0 considers the existing conditions of, and around the site. This section also looks at the baseline transport data on which the assessment is based. It gives the relevant details of the local highway network surrounding the site and assesses the accessibility levels of the site via modes of transport other than the private car;
- Section 4.0 details the national and local policy considerations relevant to the development site and land use proposed;
- Section 5.0 looks at the proposed development in detail by giving regard to the proposed access strategy and the site's internal layout;
- Section 6.0 evaluates the impact of Traffic Generation associated with the proposal; and
- Section 7.0 includes a summary and draws together the conclusions of the assessment.

2. Background

2.1 Site Location & Application Context

2.1.1 The site is located at the eastern end of Oaklands Road, close to the A21 and less than 1 km from Bromley town centre. The existing site is occupied by a substantial three storey building divided into two large 2/3 bed apartments which will be demolished. The total site area equates to 0.148 hectares. A site location Plan can be seen as **Figure 1**.

2.1.2 The "Red Line" boundary of the application site can be seen as **Figure 2.**

2.1.3 The site lies within a location characterised by residential dwellings and as such, falls within a prime location to support such a use.

2.1.4 There is no pertinent planning history to the site in terms of transport planning/highways issues.

3. Existing Conditions

3.1 Local Highway Network

3.1.1 Oaklands Road forms a single carriageway two lane highway of some 7.6m width. Oaklands Road is a local access road and provides links to the surrounding local highway network.

3.1.2 Approximately 85m to the north east of the site, Oaklands Road forms a simple priority “Give Way” junction with the A21 London Road.

3.1.3 The A21 forms part of the Transport for London Road Network (TLRN) for which Transport for London TfL are the Highway Authority.

3.1.4 The A21 forms a major arterial route within London running from Junction 4 of the M25 in the south east to Greenwich in the north.

3.1.5 A plan showing the local highway network can be found as **Figure 3**.

3.2 Public Transport Appraisal

3.2.1 The site has a Public Transport Accessibility Level (PTAL) of 2 and is therefore considered to have a “Poor” level of accessibility to local public transport links. The full TfL PTAL report can be found in **Appendix A.**

3.2.2 The first stage in PTAL calculation is to calculate the walking distance from the site (known as the point of interest (POI)) to the nearest bus stops and rail stations (where rail can be taken to also include London Underground, DLR and trams). These stops and stations are known as service access points (SAPs)'. Only SAPs within a certain distance of the POI are included (640m for bus stops and 960m for rail stations, which correspond to a walking time of 8 minutes and 12 minutes respectively at the standard assumed walking speed of 80m/min).

3.2.3 The next stage is to determine the service level during the morning peak (defined as 0815-0915) for each route serving a SAP. Where service levels differ in each direction on a route, the highest frequency is taken. On railways, a route is generally defined as a service with a particular calling pattern - for example, services on the Piccadilly line from Hammersmith could be divided into two "routes": Cockfosters to Heathrow and Cockfosters to Uxbridge.

3.2.4 A total access time for each route is then calculated by adding together the walking time from the POI to the SAP and the average waiting time for services on the route (i.e. half the headway). This is converted to an equivalent doorstep frequency (EDF) by dividing 30 (minutes) by the total access time, which is intended to convert total access time to a "notional average waiting time, as though the route were available at the doorstep of the POI".

3.2.5 A weighting is applied to each route to simulate the enhanced reliability and attractiveness of a route with a higher frequency over other routes. For each mode (e.g. bus, Tube, DLR, tram, rail), the route with the highest frequency is given a weighting of 1.0, with all other routes in that mode weighted at 0.5.

3.2.6 Finally, the EDF and the weighting are multiplied to produce an accessibility index for each route, and the accessibility indices for all routes are summed to produce an overall accessibility index for the POI.

3.2.7 This accessibility index (AI) can then be converted to a PTAL grade (1-6) through a banding system (where AIs 0.00-5.00 are PTAL 1, 5.01-10.00 are PTAL 2, etc, up to PTAL 6 for scores of 25 and above).

3.3 Walking Appraisal

3.3.1 According to the Institute of Highways and Transportation (IHT), approximately 80% of walk journeys and walk stages in urban areas are less than one mile. The average length of a walk journey is one kilometre (0.6 miles). This differs little by age or sex and has remained constant since 1975/76. However, this varies according to location. The main factors that influence both walking distance and walking time in a city or town centre appear to be the size of the city or town itself, and the shape and quality of the pedestrianised area.

3.3.2 An average walking speed of 1.4m/s can be assumed, which equates to approximately 400m in 5 minutes or 3 miles per hour. The situation of people with mobility difficulties must be kept in mind when applying these figures.

3.3.3 A distance of 1000m for a walking journey or stage is deemed as acceptable, with a preferred maximum of 2000m.

3.3.4 A 1000 - 2000 metre band can be seen in **Figure 4**, which illustrates the localities within an acceptable walking distance of the site.

3.4 Cycling Appraisal

3.4.1 The acceptable cycling distance to new developments is regarded as being 4km, although many commuters travelling by bike will cycle much further distances than this, the Department for Transport (DFT) considers 4km as the acceptable distance. **Figure 5** illustrates the 4km band around the site and shows the localities that it covers.

4. National and Local Policy

4.1 National Policy

4.1.1 In 1998 the Government published a White Paper entitled 'A New Deal for Transport: Better for everyone'. Within this document, the Government set out its integrated transport policy to reduce the need to travel, to tackle congestion and pollution, and to support a strong economy, a sustainable environment and a healthy and inclusive society.

4.1.2 As such, the Government is committed to developing an integrated transport policy for the various regional areas throughout the United Kingdom. There is a widely recognised need to reduce the dependence on the private car through encouraging the use of public transport.

4.1.3 In the context of transportation, there are a number of goals which are relevant to the consideration of the transport impact of the development proposal. These are:

- Making the best use of existing roads for all users;
- Reducing the number of accidents and improving safety on the road network;
- Restraining private car based commuting;
- Encouraging responsible car usage and promoting public transport, walking and cycling;
- Improving the road network to assist public transport services;
- Providing for the needs of the mobility impaired; and
- Improving the choice of transport available, especially for disabled people and those without a car.

4.1.4 All developments should be progressed with reference to the transport requirements of the National Planning Policy Framework (NPPF) national Planning Policy Guidance note (PPG 13). The core documents from a transport perspective are the NPPF, and PPG13 "Transport". In essence, these documents state the same primary objective for sustainable methods of transport, namely;

- To promote more sustainable transport choices for people;

- To promote accessibility to jobs and services by public transport, walking and cycling; and
- To reduce the need to travel, especially by private car.

4.1.5 The central objectives of PPG13 are set out in paragraph 4 and are to:

"Integrate planning and transport at the national, regional, strategic and local level to:

- promote more sustainable transport choices for both people and for moving freight;
- promote accessibility to jobs, shopping, leisure facilities and services by public transport, walking and cycling; and
- reduce the need to travel, especially by car."

4.1.6 Paragraph 6 of PPG13 sets out a series of objectives for Local Planning Authorities in terms of the preparation of development plans. These include the need to:

- "actively manage the pattern of urban growth to make the fullest use of public transport, and focus major generators of travel demand in city, town and district centres and near to major public transport interchanges;
- ensure that strategies in the development and Local Transport Plan complement each other and that consideration of development plan allocations and local transport investment and priorities are closely linked;
- use parking policies, alongside other planning and transport measures, to promote sustainable choices and reduce reliance on the car for work and other journeys; ….."

4.1.7 The new National Planning Policy Framework (NPPF) sets out 12 core planning principles which include;

- to encourage the effective use of land by reusing land that has been previously developed (brownfield land), provided that it is not of high environmental value;
- actively manage patterns of growth to make the fullest possible use of public transport, walking and cycling, and focus significant development in locations which are or can be made sustainable;

4.1.8 The NPPF sets a strategy for promoting sustainable transport. It requires that decisions should take account of whether:

- the opportunities for sustainable transport modes have been taken up depending on the nature and location of the site, to reduce the need for major transport infrastructure;
- safe and suitable access to the site can be achieved for all people; and;
- improvements can be undertaken within the transport network that cost effectively limits the significant impacts of the development.

"Development should only be prevented or refused on transport grounds where the residual cumulative impacts of development are severe."

4.1.9 Developments should be located and designed where practical to;

- accommodate the efficient delivery of goods and supplies;
- give priority to pedestrian and cycle movements, and have access to high quality public transport facilities;

- create safe and secure layouts which minimise conflicts between traffic and cyclists or pedestrians, avoiding street clutter and where appropriate establishing home zones;

- consider the needs of people with disabilities by all modes of transport.

4.2 Local Policy

4.2.1 Policy T3 of the Local Development Plan states that off street parking spaces in new development will be expected to be provided at levels no higher than the parking standards set out in Appendix II.

4.2.2 Policy T7 of the Local Development Plan states that In determining planning applications, the Council will consider as appropriate the potential impact on cyclists and their safety and will seek provision of suitable facilities, including cycle parking/storage to the standards set within Appendix II, and contributions to the provision of the Strategic and Local Cycle Networks as identified on the Proposal Map.

4.2.3 Policy T17 of the Local Development Plan states that when considering proposals for the redevelopment of frontages within town Centre's or development in other areas where servicing problems arise, the Council will normally require that rear-servicing facilities be provided.

4.2.4 Policy T18 of the Local Development Plan states that in determining planning applications, the Council will consider as appropriate the potential impact on road safety and will seek to ensure road safety is not adversely affected.

5. Proposed Development

5.1 Development Description

5.1.1 Outline planning permission is sought for:

"Development of 11 No one and two bedroom apartments."

5.1.2 The 11 dwellings will consist of 7 x one bedroom and 4 x 2 bedroom dwellings.

5.1.3 The site layout plan can be seen as **Figure 6**.

5.2 Proposed Access Strategy & Internal Site Layout

5.2.1 Two accesses currently serve the existing site. One of these will be closed off with the kerb reinstated, and the other will remain as the singular vehicular, pedestrian and cyclist access to the parking forecourt at the rear of the site.

5.2.2 The access driveway ranges in width from 4.8m at its widest to 3.1m at its narrowest. In line with Manual for Streets, this is widest enough for two vehicles to pass within the site and wide enough for vehicles and pedestrians and cyclist to pass in a safe manner.

5.2.3 A bin store is located to the front of the site and refuse collection will take place on-street.

5.2.4 A suite of swept path analysis drawings demonstrating the suitability of the development's site layout and access can be seen in **Appendix B**.

5.3 Car Parking Provision

5.3.1 11 parking spaces are provided within the development as a whole. Each residential dwelling is to be provided with 1 space including 1 dedicated disabled parking bay.

5.3.2 London Borough of Bromley parking standards dictate a maximum provision of 1 space per residential unit, which the proposed level of parking provision meets.

5.3.3 The level of provision is also in accordance with Chapter 6 of the London Plan.

5.3.4 The rear parking court provides 10 spaces. The dedicated disabled parking bay lies to the front of the site and accessed off the access driveway.

6. Development Traffic Generation

6.1.1 For developments consisting of a limited number of residential dwellings in such a location as Bromley it is not appropriate to make use of the TRICS database to determine an appropriate dataset, but to utilise the accepted National Travel Survey (NTS)

6.1.2 The most recent NTS with full data results undertaken in 2010 determined that for residential dwellings the typical trip rates are broken down as follows:

TABLE 1: NTS Journey Purpose Split

Journey Purpose	0800-0900	1700-1800
Commuting and Business	28%	39%
Education/Escort Education	47%	3%
Shopping	5%	12%
Personal Business	14%	20%
Leisure	6%	26%

6.1.3 Typical expected trip rates per household are as follows:

TABLE 2: NTS Person Trip Rates

	Arrivals	Departures	Totals
AM Peak 0800-0900	0.285	0.982	1.267
PM Peak 1700-1800	0.660	0.403	1.603

6.1.4 The above trip rates are person trip rates, so taking an extremely robust position assumption that 100% of all person trips are made by individual private vehicle the following vehicular trip rates would be seen:

TABLE 3: Development Vehicular Trip Rates

	Arrivals	Departures	Totals
AM Peak 0800-0900	3	11	14
PM Peak 1700-1800	7	4	11

6.1.5 Clearly, the above assumption and estimations are extremely robust. Notwithstanding the robust assessment, the above vehicular trip rates are at a level as to be classed as immaterial in traffic impact terms.

6.1.6 The existing use generates in the region of 4 vehicular trips during the peak hours.

6.1.7 A nett total of 10 vehicular movements occurring at the site access during the network peak hours is immaterial when assessed in isolation or against the existing background traffic flows on Oaklands Road and the A21.

7. Summary and Conclusions

7.1.1 This Transport Assessment has been prepared by Sarnlea Limited on behalf of South East Living (SEL) in order to support the forthcoming outline planning application at 4 & 4A Oaklands Road, Bromley, BR1 3SL.

7.1.2 Outline planning permission is sought for:

"Development of 11 No one and two bedroom apartments."

7.1.3 The Transport Assessment has considered the transport implications of the development proposals and the conclusions of the report are as follows:

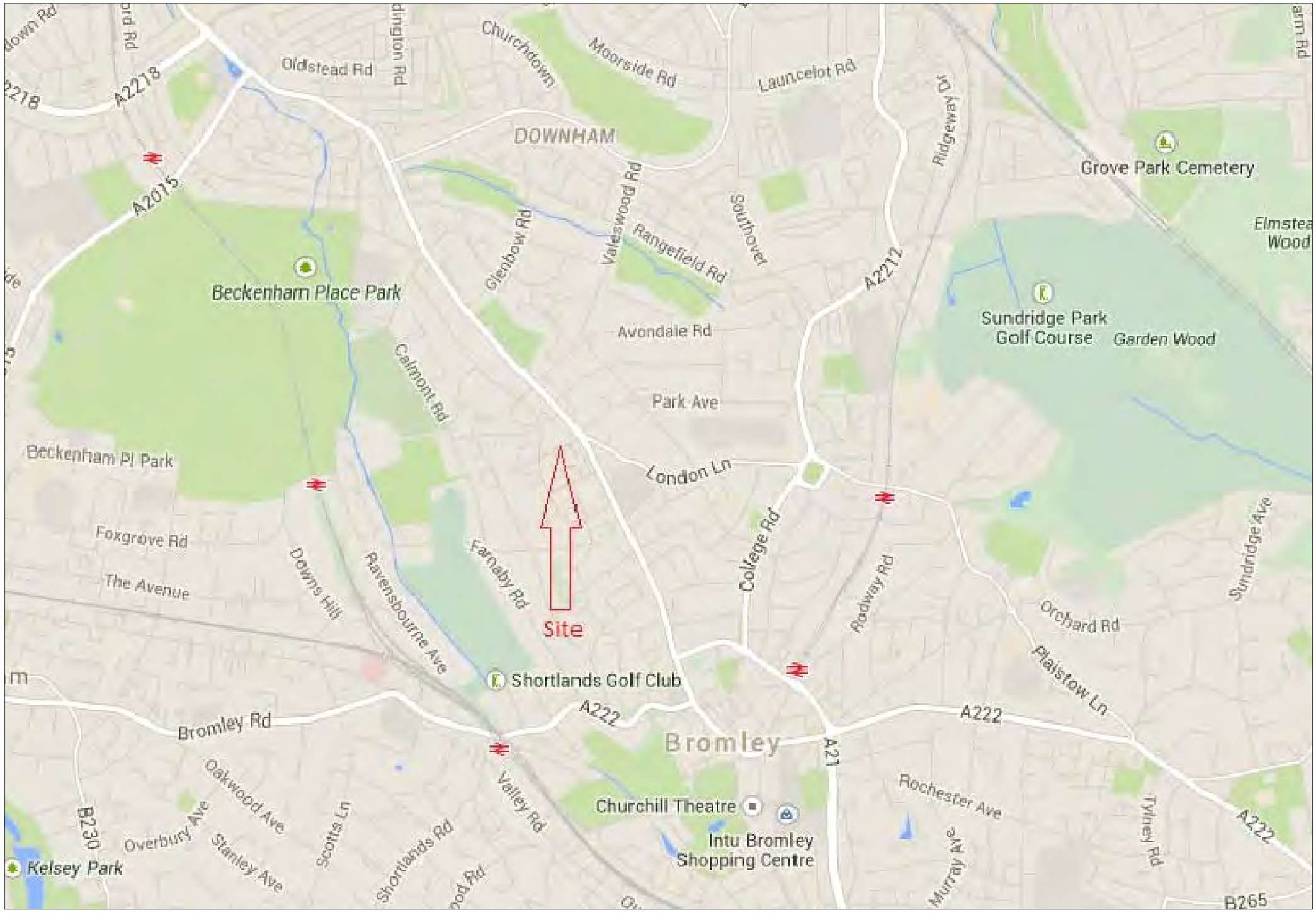
- The development proposals have been formulated in accordance with both local and national policy to which the proposal accords well;
- The proposal has been assessed in terms of its accessibility by non-car borne modes and the level of accessibility is adequate and in accordance with a development of this type and scale;
- The likely level of traffic has been obtained from an interrogation of the National Travel Survey incorporating the TRICS database. The assessment has found that the development will generate a nett level of traffic (10 vehicular trips) that is immaterial in terms of highway safety and efficiency;
- The internal highway layout is suitable and fit for purpose in terms of both highway safety and highway efficiency; and
- The details regarding refuse collection have been assessed as being acceptable

Figures

Figure 1

Scale in Metres

0 1 2 3 4 5 for 1:100



NOTES

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Rev.	Description	Date	Chk'd

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Job

4 & 4A Oaklands Road, Bromley

Drawing

Site Location

Scales	Date	Drawn	Checked
1:100 @ A3	Jan 2015	AM	AM

Number Revision

Figure 2

No's 4 & 4a Oaklands Road, Bromley, BR1 3SL

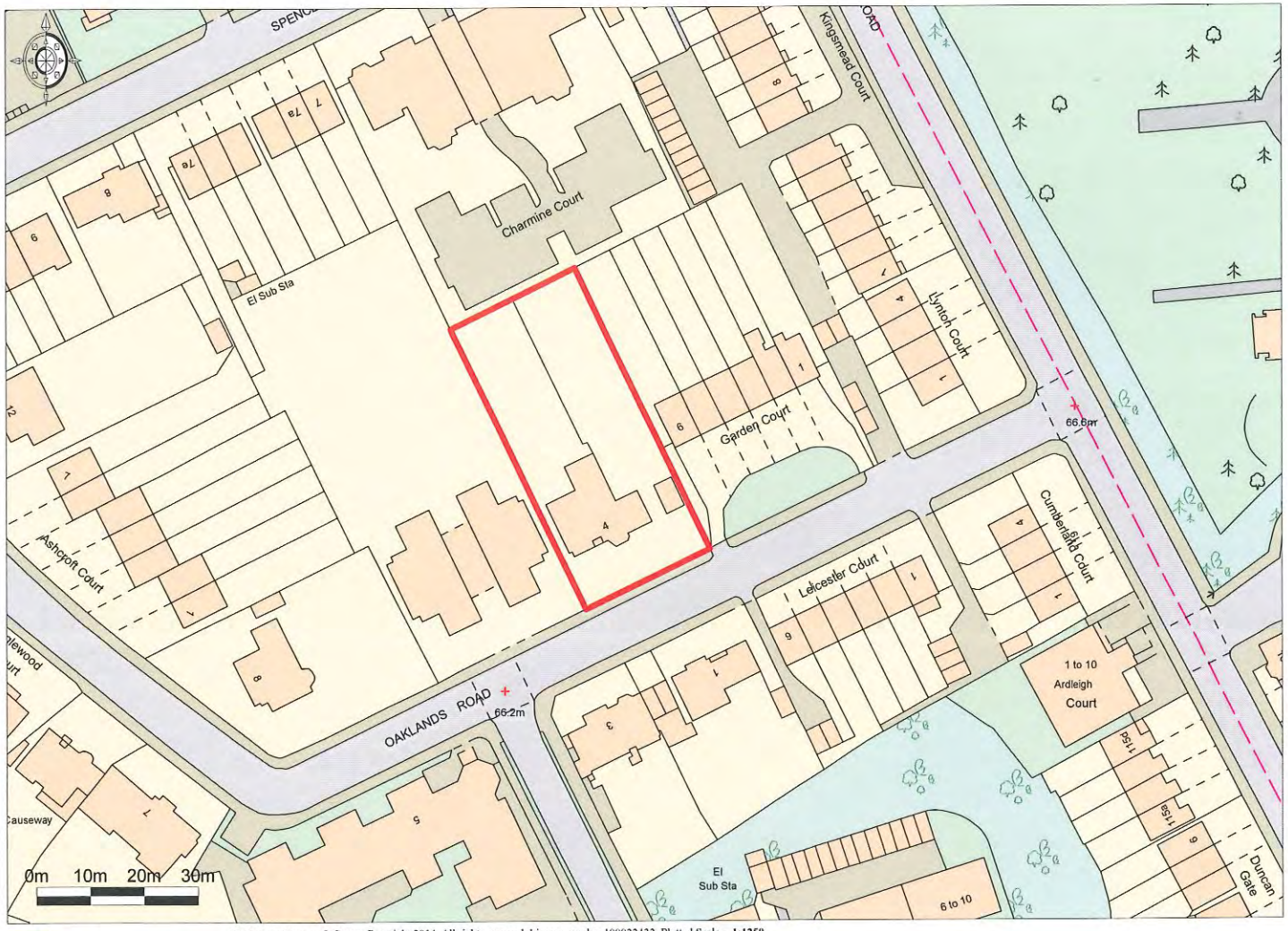

Figure 3

Scale in Metres

0 1 2 3 4 5 for 1:100

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4 & 4A Oaklands Road, Bromley

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Local Highway Network

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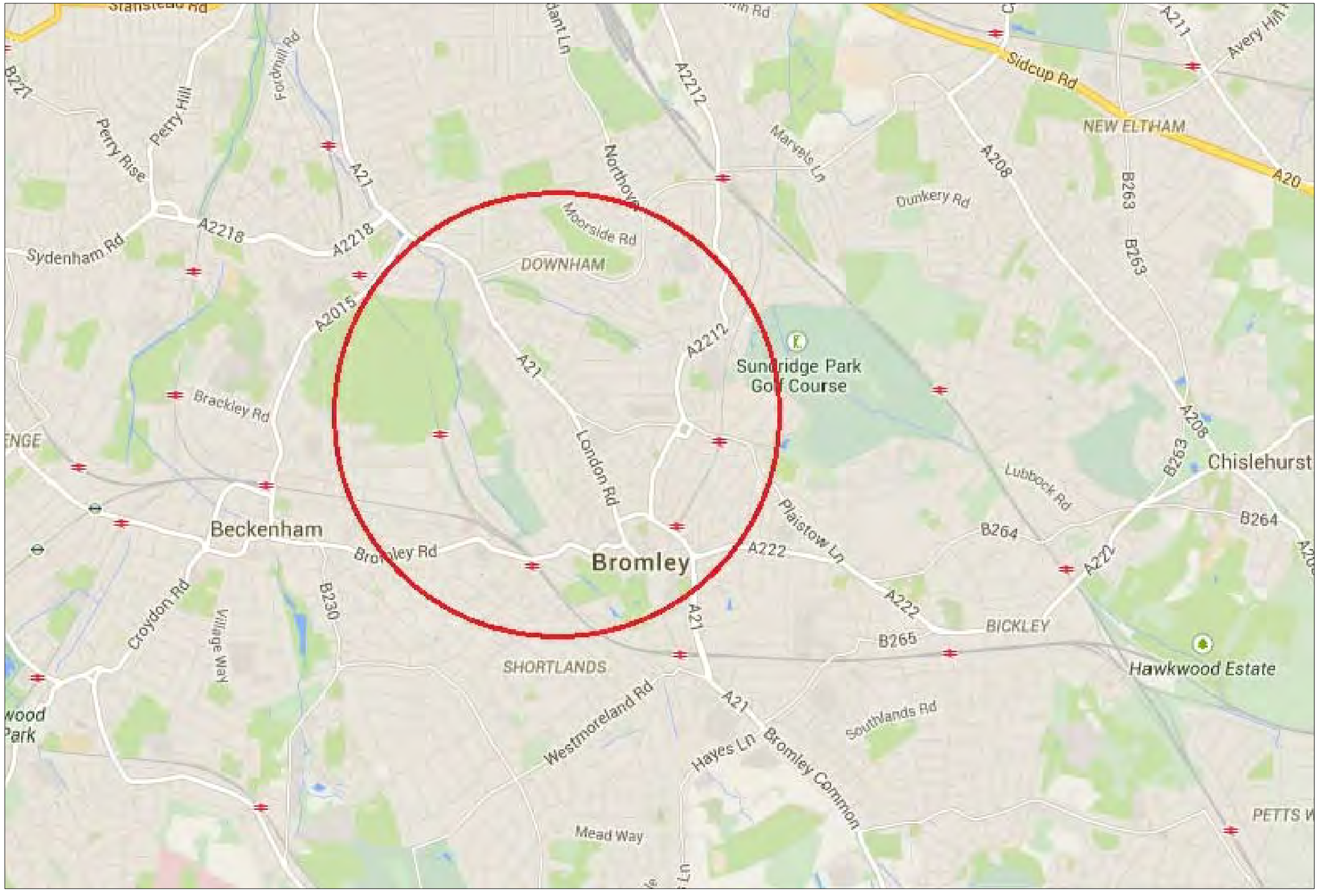
1:100 @ A3	Jan 2015	AM	AM

Number Revision

Figure 4

Scale in Metres

0 1 2 3 4 5 for 1:100



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Job

4 & 4A Oaklands Road, Bromley

Drawing

Walking Isochrone

Scales	Date	Drawn	Checked
1:100 @ A3	Jan 2015	AM	AM

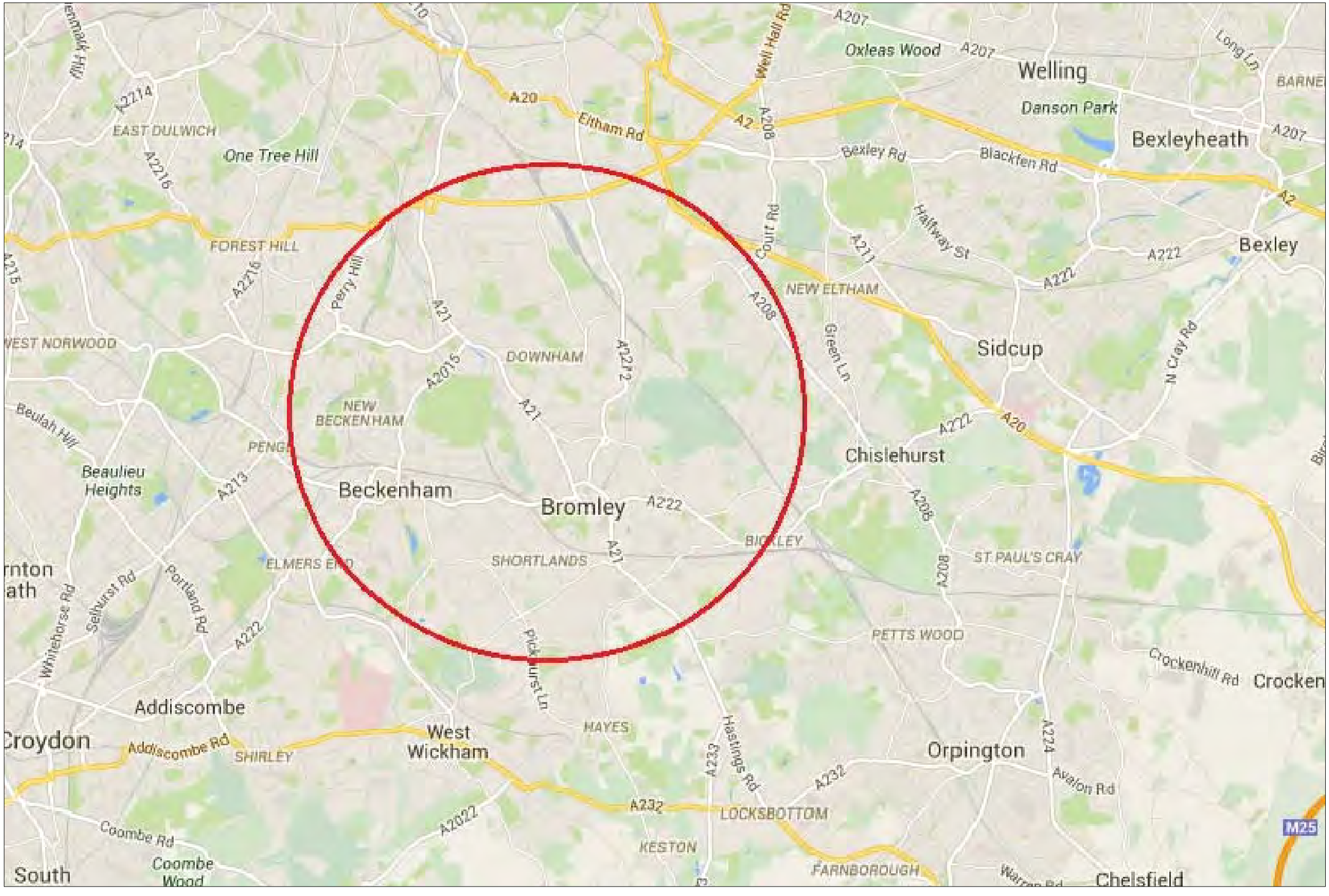
Number Revision

Figure 5

Scale in Metres

0 1 2 3 4 5

for 1:100



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Job

4 & 4A Oaklands Road, Bromley

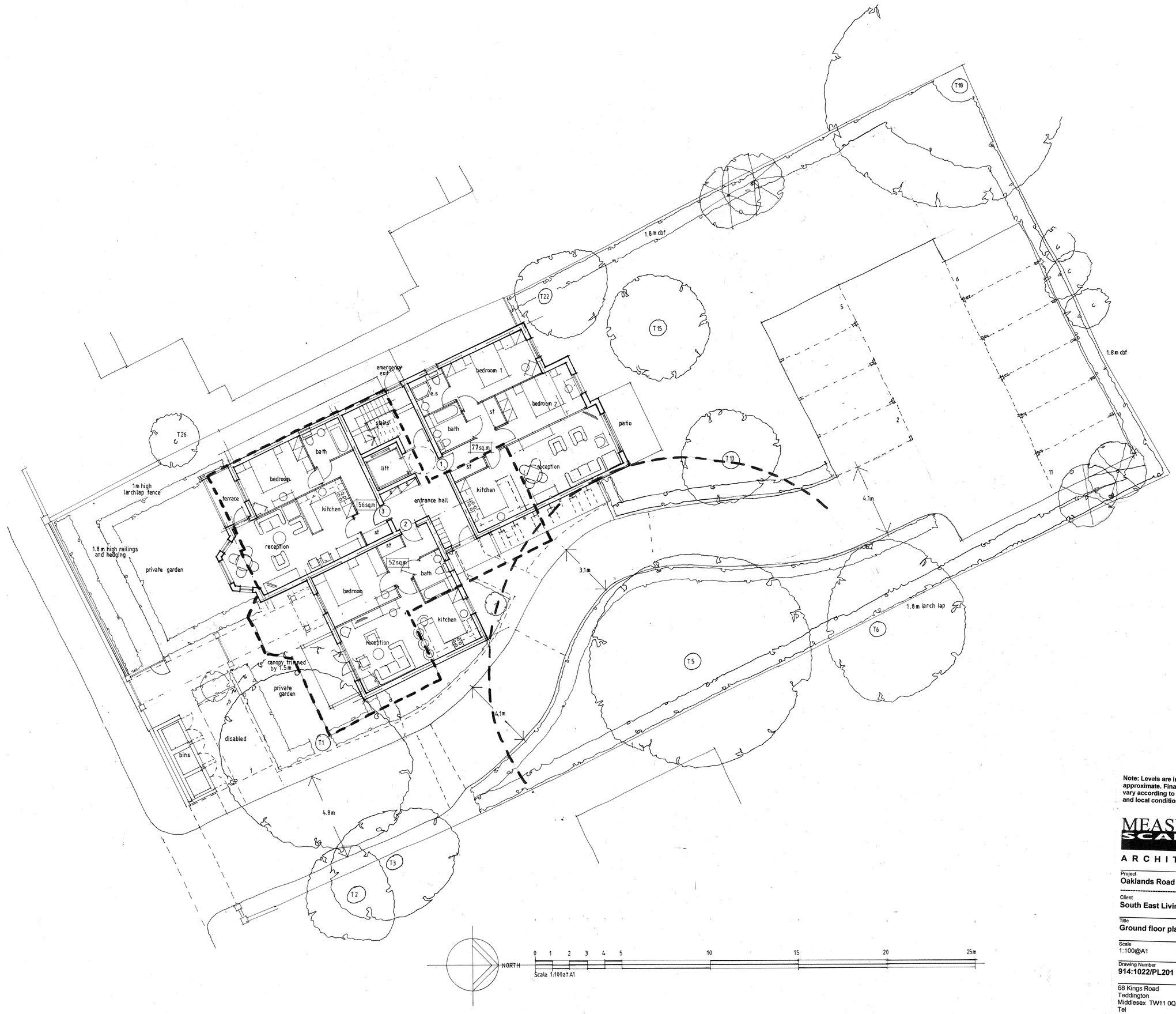
Drawing

Cycling Isochrone

Scales	Date	Drawn	Checked
1:100 @ A3	Jan 2015	AM	AM

Number Revision

Figure 6



Note: Levels are indicative and approximate. Final levels may vary according to construction and local conditions.

MEASURES SCARFE

ARCHITECTS

Project
Oaklands Road BR2 3SL

Client
South East Living Group

Title
Ground floor plan

Scale
1:100@A1

Date
06/11/2014

Drawing Number
914:1022/PL201

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Appendices

Appendix A

PTAI Study Report File Details

Date	22/01/2015 14:27
Day of week	M-F
Time period	AM peak
Walk speed	4.8 kph
Walk file	PLSQLTest

POI Name: 539638, 170159

Bus Services

Reliability factor for this mode is 2
Maximum walk time for this mode is 8 minutes
Maximum walk distance for this mode is 640.0 metres

Stop BROMLEY HL AVONDALE ROAD
Walk time to stop from POI is 7.48 minutes
Walk distance to stop from POI is 598.53 metres
- Route 320 Direction OUT Frequency 5.0 giving AWT of 6.0 minutes
- Route 320 Direction BACK Frequency 5.0 giving AWT of 6.0 minutes
- Route 208 Direction BACK Frequency 5.0 giving AWT of 6.0 minutes
- Route 208 Direction OUT Frequency 5.0 giving AWT of 6.0 minutes
- Route 208 Direction OUT Frequency 5.0 giving AWT of 6.0 minutes
- Route 208 Direction BACK Frequency 5.0 giving AWT of 6.0 minutes

Stop BROMLEY HILL LONDON LANE
Walk time to stop from POI is 4.69 minutes
Walk distance to stop from POI is 375.47 metres
- Route 320 Direction OUT Frequency 5.0 giving AWT of 6.0 minutes
- Route 320 Direction BACK Frequency 5.0 giving AWT of 6.0 minutes
- Route 208 Direction BACK Frequency 5.0 giving AWT of 6.0 minutes
- Route 208 Direction OUT Frequency 5.0 giving AWT of 6.0 minutes
- Route 208 Direction OUT Frequency 5.0 giving AWT of 6.0 minutes
- Route 208 Direction BACK Frequency 5.0 giving AWT of 6.0 minutes

Stop LONDON RD HEATHFIELD RD
Walk time to stop from POI is 1.8 minutes
Walk distance to stop from POI is 144.04 metres
- Route 320 Direction OUT Frequency 5.0 giving AWT of 6.0 minutes
- Route 320 Direction BACK Frequency 5.0 giving AWT of 6.0 minutes

Route 208 Direction BACK Frequency 5.0 giving AWT of 6.0 minutes
Route 208 Direction OUT Frequency 5.0 giving AWT of 6.0 minutes
Route 208 Direction OUT Frequency 5.0 giving AWT of 6.0 minutes
Route 208 Direction BACK Frequency 5.0 giving AWT of 6.0 minutes
Stop FARNABY ROAD BROMLEY AVE
Walk time to stop from POI is 6.2 minutes
Walk distance to stop from POI is 496.38 metres
Route 354 Direction OUT Frequency 3.0 giving AWT of 10.0 minutes
Route 354 Direction BACK Frequency 3.0 giving AWT of 10.0 minutes
Route 354 Direction BACK Frequency 3.0 giving AWT of 10.0 minutes
Route 354 Direction OUT Frequency 3.0 giving AWT of 10.0 minutes
Stop Farnaby Road Golf Course
Walk time to stop from POI is 7.97 minutes
Walk distance to stop from POI is 637.96 metres
Route 354 Direction OUT Frequency 3.0 giving AWT of 10.0 minutes
Route 354 Direction BACK Frequency 3.0 giving AWT of 10.0 minutes
Route 354 Direction BACK Frequency 3.0 giving AWT of 10.0 minutes
Route 354 Direction OUT Frequency 3.0 giving AWT of 10.0 minutes
Stop LONDON ROAD FARWIG LANE
Walk time to stop from POI is 5.26 minutes
Walk distance to stop from POI is 420.51 metres
Route 320 Direction OUT Frequency 5.0 giving AWT of 6.0 minutes
Route 320 Direction BACK Frequency 5.0 giving AWT of 6.0 minutes
Route 208 Direction BACK Frequency 5.0 giving AWT of 6.0 minutes
Route 208 Direction OUT Frequency 5.0 giving AWT of 6.0 minutes
Route 208 Direction OUT Frequency 5.0 giving AWT of 6.0 minutes
Route 208 Direction BACK Frequency 5.0 giving AWT of 6.0 minutes

TATs for this mode
Route 320 Stop LONDON RD HEATHFIELD RD TAT 9.8 minutes EDF 3.06
Route 208 Stop LONDON RD HEATHFIELD RD TAT 9.8 minutes EDF 3.06
Route 354 Stop FARNABY ROAD BROMLEY AVE TAT 18.2 minutes EDF 1.65

Best EDF is 3.06
Half of all other EDFs is 2.35

AI for this mode is 5.42

Underground Services

Reliability factor for this mode is .75
Maximum walk time for this mode is 12 minutes
Maximum walk distance for this mode is 960.0 metres

** No stops found within buffer for this POI

Rail Services

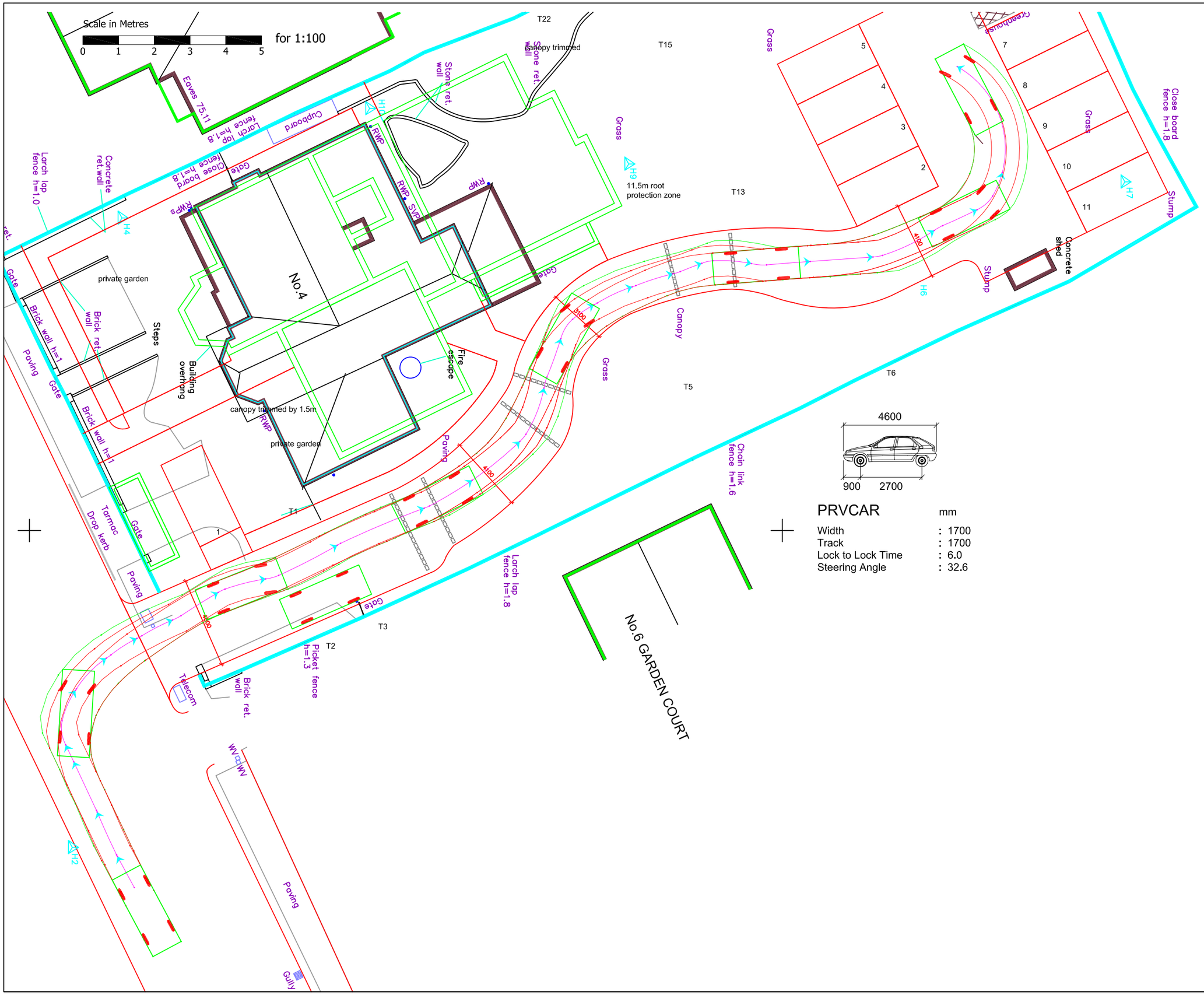
Reliability factor for this mode is .75
Maximum walk time for this mode is 12 minutes
Maximum walk distance for this mode is 960.0 metres

** No stops found within buffer for this POI

Total AI for this POI is 5.42. X: 539638, Y: 170159.

PTAL Rating is 2.

Appendix B



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4 & 4A Oaklands Road, Bromley

Drawing

Car Access and Two Cars Passing

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