



Gas Works Road, Reading

Proposed residential redevelopment

TRANSPORT ASSESSMENT

Prepared by: Entran Ltd

On behalf of: Galliard Homes

Date: February 2016



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1.0 INTRODUCTION

1.1 Overview

- 1.1.1 This Transport Assessment (TA) has been prepared on behalf of Galliard Homes in support of a planning application for the redevelopment of a site known as land at Gas Works Road, Reading.
- 1.1.2 The application seeks full planning permission for a residential development comprising the extension and refurbishment of two existing buildings to provide the following:

- 34 residential units (use class C3);
- (composition: 16 x 1-bed, 17 x 2-bed, 1 x 3-bed);
- Creation of residential amenity space;
- Refuse collection provision;
- 34 residential cycle parking spaces.

- 1.1.3 The scope of this assessment was discussed with the Highways Officers at Reading Borough Council (RBC) and pre-application discussions have been held with the local planning authority. This TA has been developed following those discussions; it takes account of the comments received as well as local and national guidance.
- 1.1.4 Guidance published by the DfT and the DCLG in 2007 provided advice on the content and preparation of Transport Assessments and Transport Statements. It also assisted stakeholders to determine whether an assessment may be required and, if so, what the level and scope of the assessment should be.
- 1.1.5 Previous guidance on the assessment of traffic implications associated with development proposals was contained in the “Guidelines for Traffic Impact Assessment” published by the Institute of Highways and Transportation (IHT) in 1994. Since the IHT guidelines were produced, there has been a significant change in Government policy and general guidance regarding improved sustainability in transport. The fundamental difference between TAs and the old TIAs is that TAs seek to influence modes of travel and assess person-trips rather than vehicle trips, whereas TIAs were based on the principles of “predict and provide” for the private car.
- 1.1.6 The 2007 document brought the Guidance on transport assessment up to date with these changes in Government policy, and expanded it to address the assessment of the potential implications of development proposals on the entire transport system.
- 1.1.7 In 2014 DCLG published a suite of Planning Practice Guidance including advice entitled “Travel plans, transport assessments and statements in decision taking”. The 2007 guidance has not been formally cancelled but now sits beneath the PPG as current government guidance on the transport related effects of development.
- 1.1.8 This TA includes a three-part Transport Implementation Strategy which comprises a Framework Travel Plan, Delivery & Servicing Plan, and Demolition and Construction Management Plan. These are management documents to be developed in partnership with RBC and which will manage and influence the transportation of people and goods to and from the proposed development.

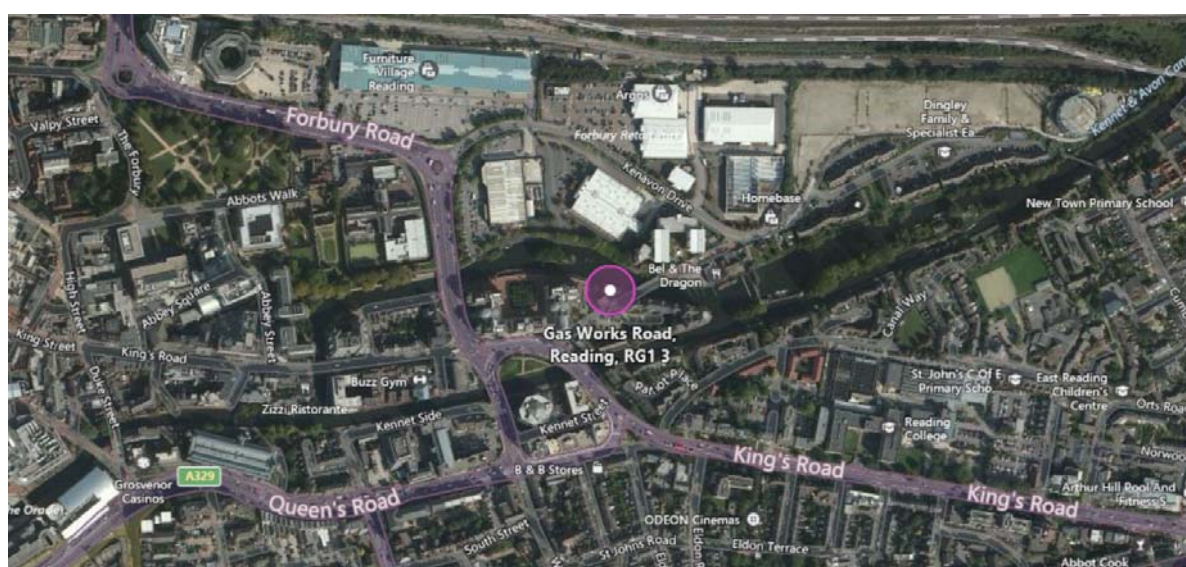
The structure of this report is divided into a further eight sections. Following this introduction, Section 2 provides details of the development site while Section 3 sets out details of the local transport network. Section 4 describes the development proposals in detail. Section 5 provides a Delivery and Servicing Plan and Construction Management Plan as the first two parts of a three-part Transport Implementation Strategy. Section 6 summarises the Framework Travel Plan, developed to influence travel behaviour and Section 7 then assesses multi-modal journeys and the development’s predicted impact on the transport network. Section 8 summarises this report and draws conclusions from this assessment.

2.0 SITE LOCATION AND DESCRIPTION

2.1 Strategic Site Location

- 2.1.1 The Site is located to the north of Gas Works Road, immediately to the south of the River Kennet. The site is bounded on its western side by Bembridge Place. The site is generally triangular in shape and so is bounded to the south-east by Gas Works Road, to the north by the River Kennet and to the west by a privately maintained access way which links to the walkway on the southern side of the River Kennet. Due to redevelopment in recent years Gas Works Road is now predominantly residential in nature. The site falls within the Reading Central Area Action Plan. The area immediately to the north of the River Kennet is allocated in the Reading Borough Council (RBC) Central Area Action Plan as the East Side Major Opportunities area. The site location is shown in 2.1 below:

Figure 2.1 – Site location



- 2.1.2 The site comprises two buildings; one two-storey brick building (the former Social Club, built in 1903) which runs approximately north-west to south-east along the north-eastern boundary with the River Kennet, and a single storey building that currently houses a redundant gas pipe. A single storey extension to the main building is located in the north-eastern part of the site. The remainder of the site is surfaces with hardstanding.
- 2.1.3 The site extends to 0.159 acres (approximately 0.064ha).

2.2 Pre-application discussions

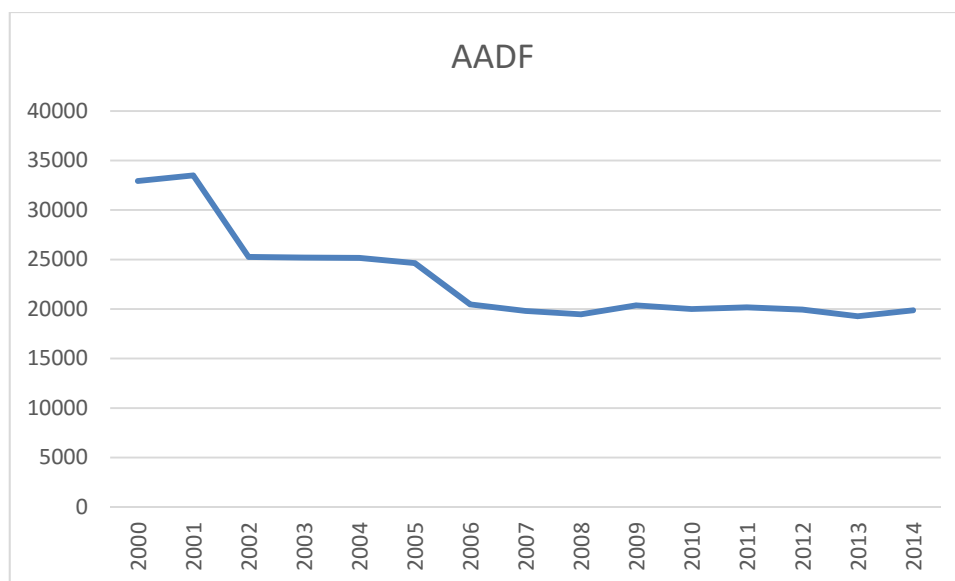
The developer entered into pre-application discussions with the local planning authority (RBC). Part of their initial response included advice on parking provision. The site is immediately adjacent to but not within their parking SPD Zone 1, however, RBC suggested that the development should provide 0.5 car parking spaces per flat which is akin to the Zone 1 standard. The developer was prepared to demolish the existing buildings and introduce a basement parking area; however, the planning authority was keen to see the existing buildings retained as far as possible. For this reason Entran entered into a dialogue with the RBC Transport Development Control Manager. It was agreed that as the neighbouring roads have either parking restrictions or are in controlled parking zones, and given the desire to retain the existing buildings, this would be a suitable location to provide a car-free development. Any such development would have to be supported by a robust Travel Plan and a S106 obligation preventing the residents from being eligible for residents' parking permits.

3.0 LOCAL TRANSPORT NETWORK

3.1 General

- 3.1.1 The site takes access from Gas Works Road which runs from Kings Road to Alexander Turner Close. Immediately to the north-east of the site Gas Works Road is closed to vehicular traffic prior to its bridge over the River Kennet. The length of road from which the site takes access therefore operates as a cul-de-sac for vehicles but is available as a through-route for pedestrians and cyclists.
- 3.1.2 Kings Road/Watlington Street/Forbury Road (A329) forms part of Reading's Inner Distribution Road (IDR). This is a heavily used route with daily flows in excess of 21,000 vehicles along Forbury Road. The IDR is an orbital route that provides access around Reading town centre, connecting to the key radial routes including the A4 (access to M4 J12); A329 (access to Wokingham and A329(M)); and A33 (Access to Theale, Basingstoke and M4 J11).
- 3.1.3 To the west of the Watlington Street gyratory Kings Road is more lightly trafficked with average daily flows recorded in 2014 to be 16,600 vehicles per day past the site.
- 3.1.4 The Department for Transport (DfT) has a number of permanent traffic monitoring stations located around Reading, including Kings Road and Queen's Road. Those monitoring stations show that average daily traffic flows in this vicinity fell overall between 2000 and 2014 and remained almost static between 2006 and 2014. Some of this reduction in traffic volumes may be as a result of the economic climate since 2006 but the data would suggest that the trend has been downwards over a longer period as illustrated in table 3.1 below:

Table 3.1 – DfT AADT trends for Reading town centre in the vicinity of Gas Works Road



- 3.1.5 The site is well placed in relation to the strategic road network. The historic uses on the site would represent a very small proportion of existing baseline traffic movements on this part of the highway network.

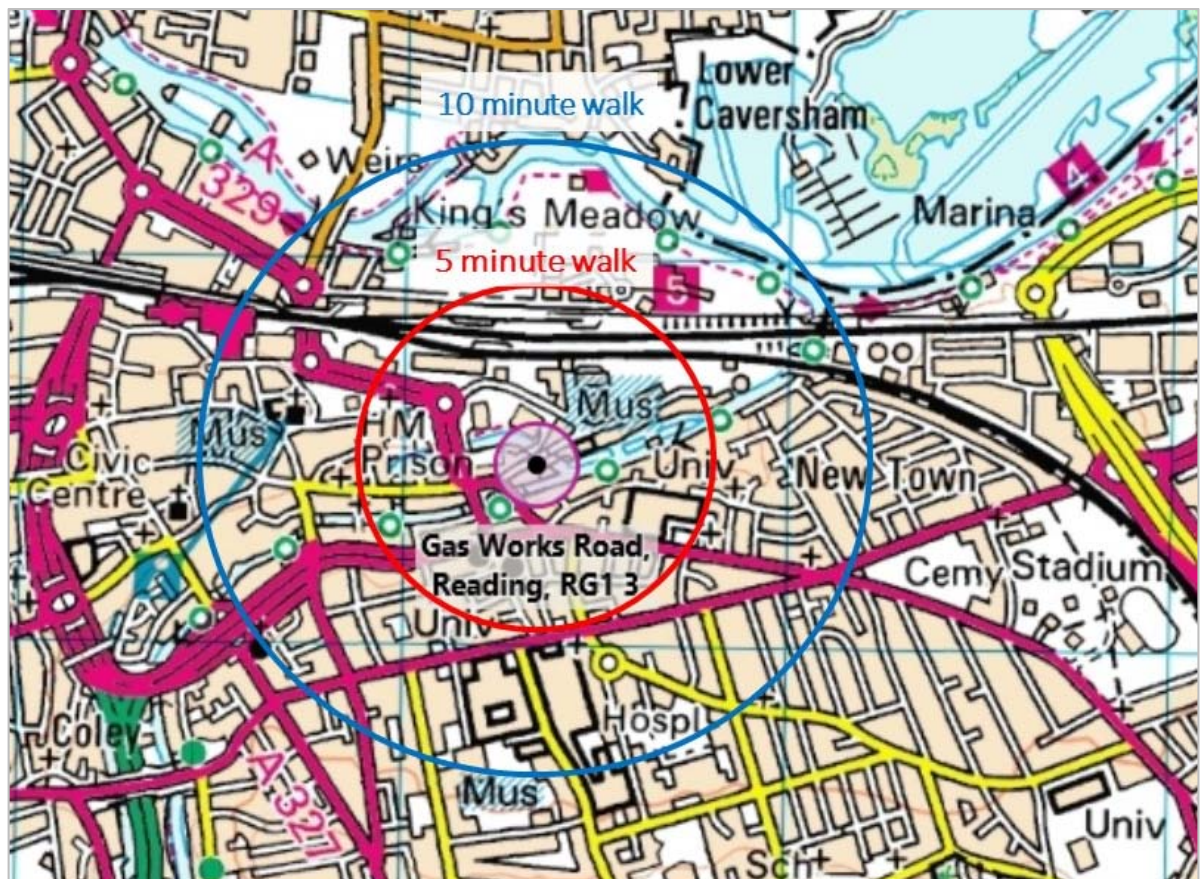
3.2 On-Street Parking

- 3.2.1 The A329 and IDR are urban clearways. Bembridge Place and Kings Road in the vicinity of the site are protected on both sides by double yellow lines denoting no waiting at any time. Further west Kings Road has pay-and-display on-street parking bays (8am -8pm max 2 hrs).
- 3.2.2 All roads within the central 'Zone 1' are protected by waiting restrictions. All residential roads within walking distance of the site (such as Orts Road and Kennet Side) are covered by a Controlled Parking Zone allowing parking for permit holders only.

3.3 Pedestrians

- 3.3.1 Acceptable journey distances on foot vary depending on the purpose of the journey, the environment in which the journey is taking place and of course the individual walking. Prior to being superseded by the National Planning Policy Framework (NPPF) PPG13 suggested that walking offers the greatest potential to replace short car trips for journeys less than 2km. The IHT guide 'Providing for Journeys on Foot' suggests that for commuting a desirable walking distance would be 500m, an acceptable walking distance would be 1km and the preferred maximum walking distance would be 2km, in line with the PPG13 advice.
- 3.3.2 Figure 3.1 shows walking isochrones from the site. This indicates that a wide range of facilities such as medical facilities, schools and colleges, employment, retail and entertainment uses can be reached within a short walking distance from the site. This is relevant to the proposed residential development. The walking isochrones also show that a wide residential catchment, as well as bus and rail facilities fall within easy walking distance of the site making sustainable travel to and from Gas Works Road a viable travel choice.

Figure 3.1 – Pedestrian isochrones.



- 3.3.3 Gas Works Road has footways on both sides. There are signalised pedestrian crossing facilities across Kings Road, Forbury Road and Watlington Street. The walking route from the site to the pedestrianized Reading Town Centre and Reading Station beyond can be described as direct, convenient, uncongested and with active building frontages along the entire route. There are no prohibitive gradients and the route is well lit and well supervised.
- 3.3.4 To the north-east of the site the closure of Gas Works Road at the river bridge means that this section of road is lightly trafficked and attractive for pedestrians. The area to the north of the river is defined as the East Side Major Opportunity Area and will therefore become an attractive destination in the future for residents of the Gas Works Road development.
- 3.3.5 An audit of crossings around the site shows that the footways on Gas Works Road, Kings Road and Forbury Road have flush dropped crossings (<6mm). However, tactile paving is only provided at

controlled crossings rather than all road junctions. This appears to be a conscious policy decision by RBC.

- 3.3.6 Immediately adjacent to the site pedestrians can access the walkway along the southern side of the River Kennet, this traffic-free route runs as far as Forbury Road.
- 3.3.7 Forbury Road crosses the River Kennet. A ramp on the northern side provides an alternative and pleasant pedestrian route to the station referred to as Chestnut Walk, a public right of way footpath leading to the Abbey ruins and Forbury Gardens.
- 3.3.8 On the southern side of the Kennet and Avon Canal the metalled towpath can be reached via a ramp on the western side of the bridge or a set of steps on the eastern side of the bridge. This towpath provides a direct and traffic-free route to the south of Reading, and to the west it joins the Thames towpath.



3.4 Cycle

- 3.4.1 Gas Works Road is very well served by cycle infrastructure. RBC's cycle route map (Spring 2014) is included as **Appendix A**. There is an on-street cycle lane along the western section of Kings Road providing access to Reading Station via Broad Street, Queen Victoria Street and Station Approach.
- 3.4.2 Reading Cycle Route R2 runs directly from Kings Road, southwards over the canal to a segregated cycle route which has a sign indicating Royal Berkshire Hospital 1 minute, University of Reading 6 minutes. Route R2 branches off to R20 at London Road, providing direct access to the Whiteknights campus and Earley Gate.
- 3.4.3 The canal towpath forms part of National Cycle Network Route 4 (NCN4) but also represents part of RBC's town centre cycle network to the west of the site and Reading Cycle Route R3 to the south and east of the site. There is a linking route directly from Gas Works Road to route R3. It is apparent from the cycle route map included as Appendix A that Gas Works Road represents the convergence of Reading Cycle Routes R3, R30, R20, R2, R10, R1, the town centre network and NCN4. There is therefore no doubt that the site is exceptionally well placed to promote travel by cycle.





3.5 Public transport - buses

- 3.5.1 The site is extremely well served by bus services. The nearest bus stops are located on Kings Road and Watlington Street within 100m of the site. All stops have timetables and raised kerbs for low floor buses. The stops on Watlington Street also have shelters and real time passenger information (RTI).
- 3.5.2 Table 3.2 summarises the services available from the bus stops on Kings Road, Forbury Road and Watlington Street within 1 minute's walk of the site. Full timetables are available at <http://www.reading-travelinfo.co.uk/bus/services.aspx>

Table 3.2 – Bus route summary

Route Number	Details	duration	frequency
3	Wokingham – Arborfield Cross – Shinfield - Reading	0637- 2355	Peak 20 mins Otherwise 30 mins
4/X4	Bracknell – Wokingham - Reading	0629 - 2318	15 mins
9	Reading Station – RBH – Shinfield Park	0520-2330	30 mins
13	Reading Station – Bulmershe – Woodley Centre – Woodley Airfield	0502-2322	30 mins
14	Reading Station – Shepherd's Hill – Woodley Centre – South Woodley – Colemans Moor	0522-2319	30 mins
17	Tilehurst – Central Reading – Wokingham Road	24 hrs	Peak 7 mins Otherwise 10-15 mins
19 B, C	Reading Station – RBH – Woodley – Lower Earley ASDA	0600-1920	Peak 30 mins Otherwise hourly
19A	Reading Station – RBH – University - Woodley	0642-1940	Hourly
128-129	Reading Station – Sonning – Charvil – Twyford - Wokingham	0645-1915	Peak 14 mins Otherwise 30-60mins
500	Loddon Bridge P&R – Central Reading	0645-1848	Peak 10-15 mins Otherwise 15 mins
850	Reading Station – Charvil – Twyford – Wargrave - Henley	0629-1950	Peak 30 mins Otherwise hourly

- 3.5.3 It is evident from Table 3.2 that the site is extremely well served by buses, operating from early in the morning to late at night at very good frequencies. Importantly, the frequencies are such that passengers are able to turn up at a bus stop and catch the next bus rather than having to plan their journeys around a timetable.



3.6 Public transport - rail

- 3.6.1 Reading station is located within easy walking distance of the site along routes with good pedestrian provision and no prohibitive gradients. A number of the local bus services also provide access directly to the station.
- 3.6.2 Reading Station is served by a number of rail routes, the primary route being the Great Western Railway which runs from London Paddington and splits into two lines to the west of Reading; one to Bath, Bristol and South Wales, the other to the West Country. Recent improvements to Reading Station have increased line capacity to the West Country in particular.
- 3.6.3 Other main lines connect Reading with Birmingham, Northern England and Scotland to the north, and Winchester, Southampton and Bournemouth to the south. A secondary line also connects Reading with Guildford and London Gatwick Airport.
- 3.6.4 Trains travel from Reading into London every 6-8 minutes and the journey into Paddington takes 27 minutes. Oxford can be reached in 23 minutes with trains leaving every quarter of an hour, and Bath can be reached in under an hour with trains every half hour.

3.7 Accessibility Audit Summary

- 3.7.1 The analysis of bus and rail services has indicated that the development site is located in a highly accessible area. Within walking distance of the site it is possible to access 14 bus routes and rail services to a wide geographic area. The site is therefore highly accessible to multiple modes of public transport.
- 3.7.2 The surrounding footways are adequate to accommodate further pedestrian growth. All crossing points have flush dropped kerbs and all controlled crossings have tactile paving.
- 3.7.3 The site is very well located to promote cycling as a primary mode of travel.
- 3.7.4 The Gas Works Road site is clearly extremely well placed to promote travel by sustainable modes of transport.

4.0 PROPOSED DEVELOPMENT

4.1 Development Composition

4.1.1 The application seeks full planning permission for a residential development comprising the extension and refurbishment of two existing buildings to provide the following:

- 34 residential units (use class C3);
- (composition: 16 x 1-bed, 17 x 2-bed, 1 x 3-bed);
- Creation of residential amenity space;
- Refuse collection provision;
- 34 residential cycle parking spaces.

4.1.2 Layout plans and elevations are included as **Appendix B**.

4.2 Parking Provision

4.2.1 The development is being promoted as a car-free development.

4.2.2 In October 2011 RBC adopted its document 'Revised Parking Standards and Design'. This Supplementary Planning Document (SPD) introduces a zonal approach to parking provision.

4.2.3 The SPD states that the standards for residential uses are 'the required standard' and that if a developer requires fewer parking spaces then they would need to demonstrate that there would be no detriment to highway safety as a result. Within Zone 1 the standard for one and two-bed flats is 0.5 spaces per dwelling and for three-bed flats it is 1 space per dwelling. For the proposed development that would equate to $((33 \times 0.5) + (1 \times 1)) = 17.5$ car parking spaces.

4.2.4 It is important to note that the site is in a highly accessible location with excellent links to public transport as well as walking and cycling infrastructure. There are few locations in Reading better suited to promoting car-free housing. The main corridors around the IDR are subject either to urban clearways or pay-and-display restrictions 8am-8pm seven days a week. The nearest residential roads are all Controlled Parking Zones where parking is by permit only. Therefore, given the highly sustainable location of the site and the parking restrictions in the area the proposal to implement this as a car-free development will have no detrimental effect on highway safety.

4.2.5 This matter has been discussed with officers at the highway authority and agreed in principle.

4.2.6 It has been agreed that the will enter into a S106 agreement preventing future occupiers of the proposed development from applying for residential parking permits.

4.2.7 The SPD requires secure cycle parking for residential properties at a minimum ratio of 0.5 for one and two bed flats and 1 for three-bed flats. These may be provided in the form of communal storage. For the proposed development this would equate to a requirement for 18 cycle parking spaces. The proposed development includes a communal parking area sufficient to accommodate up to 34 cycle parking spaces in the form of Sheffield loop stands. This exceeds RBC's minimum requirements and reflects the highly accessible location of the site.





- 4.2.8 The development includes a dedicated ramp to basement level with direct access for residents from street level to the cycle store.

4.3 Means of Access

- 4.3.1 The site has no vehicular access. Pedestrian and cycle access will be from a central location, mid-way along the sites Gas Works Road frontage. Within the site steps lead to the main buildings and a separate ramp is also provided. A ramp is provided down to the basement level for cyclists.



5.0 DELIVERY AND SERVICING PLAN

5.1 Overview

- 5.1.1 As stated in the introduction, this TA has been developed to seek to influence modes of travel to the proposed redevelopment rather than merely predicting travel patterns and providing mitigation.
- 5.1.2 The development will be supported by a three part *Transport Implementation Strategy* comprising;
- Framework Travel Plan
 - Delivery & Servicing Plan
 - Construction Management Plan
- 5.1.3 The majority of journeys associated with the development will be people travelling to and from the site by a range of modes of transport. These movements are covered by an over-arching Framework Travel Plan. However, the movement of goods and materials associated with flats and commercial uses will clearly require transportation by road; these are addressed in the Delivery & Servicing Plan.

5.2 Delivery facilities

- 5.2.1 Gas Works Road is a very lightly trafficked cul-de sac which is closed to through traffic at its bridge over the River Kennet. At present servicing to the adjacent residential developments takes place on-street without detriment to the free flow of traffic or pedestrian safety. The proposed development will continue this arrangement.

5.3 Consolidation

- 5.3.1 The developer understands the importance of reducing goods vehicle numbers, not least because of increasing transport cost implications. Whenever practicable the policy will be to use delivery vehicles to make any scheduled collections and vice-versa. Where possible no vehicle should arrive or depart empty.
- 5.3.2 Residents will be advised of the importance of consolidating deliveries where possible. New residents will be provided with information explaining how they can consolidate deliveries such as supermarket deliveries with their neighbours and how this can deliver cost savings. This can be co-ordinated through the residential concierge and is in accordance with RBC advice.

5.4 Residential deliveries

- 5.4.1 Residential delivery vehicles will use Gas Works Road and deliveries will be taken into the buildings via the residential lobbies. Deliveries are expected to be associated with online shopping, supermarket deliveries, post etc. It should be noted that general post and most supermarket deliveries will make deliveries as part of an existing round so would not be new to this part of the highway network.

5.5 Promotion of LGV rather than HGV

- 5.5.1 The promotion of LGVs where practicable will be mandatory. Clearly, provision is made for large vehicles (7.5t box vans, refuse vehicles etc.) but other deliveries should use LGVs where they can. The largest vehicles such as removal vehicles may have to reverse into Gas Works Road but these would be very infrequent and certainly no more than the extant uses.

5.6 Refuse collection

- 5.6.1 Refuse collection will take place by means of kerbside collection in Gas Works Road. This will form part of an existing refuse collection round.



- 5.6.2 Dedicated refuse stores are provided at ground floor level with a direct route to allow the bins to be wheeled 10m to the highway on bin collection days, of for the Council to collect them directly from the stores (subject to RBC preference).

5.7 Hours of delivery

- 5.7.1 There are no legal highway constraints limiting the hours of delivery. There are also no physical constraints within the site limiting hours of delivery. From a highway capacity perspective it would therefore be best practice to allow deliveries 24 hours a day rather than compressing deliveries into a shortened time-frame in order to minimise the number of vehicle movements during any given hour. However, if it considered that deliveries should not take place overnight for reasons of residential amenity then this could be included in the final DSP and secured by planning condition.

5.8 Route management

- 5.8.1 There are no local constraints such as weight restrictions or bridge height restrictions to dictate appropriate routes; however, all deliveries should use the highest category route available to them and avoid local residential roads.

5.9 Freight operator recognition scheme

- 5.9.1 The residential management company will enter into the Freight Operator Recognition Scheme (FORS) as part of the redevelopment. FORS is a membership scheme aimed at changing the operation of freight delivery in London. It was originally a key project within London Freight Plan and was developed to encourage freight companies to prioritise safety and reduce their impact on the environment; it is now being rolled out throughout the UK.

- 5.9.2 Key features of FORS are:

- Recognising and rewarding excellence;
- Raising Standards; and to help
- Promote Sustainability.

- 5.9.3 Being a member of FORS will help show that a company is a high-quality operator and has been recognised for following best practice. This could be an advantage when tendering for business and it will entitle a company to use the FORS logo on their stationery and vehicles and, if the FORS advice is followed, it should help the company to save money.





5.10 Construction Management Plan

5.10.1 Prior to commencement on site a Construction Management Plan (CMP) will be drawn up in partnership with RBC and submitted for approval. RBS has no specific SPD or guidance on construction management plans so the CMP will comply with the TfL guidance document 'Building a better future for freight: Construction Logistics Plans'.

5.10.2 The Gas Works Road CMP will:

- Help the construction process comply with NPPF and the Traffic Management Act;
- Demonstrate that construction materials can be delivered, and waste removed in a safe, efficient and environmentally friendly way;
- Examine the feasibility and viability of moving construction materials by water;
- Identify deliveries that could be reduced, re-timed or even consolidated, particularly during busy periods;
- Help cut congestion on local roads and ease pressure on the environment;
- Improve reliability of deliveries to the site;
- Reduce fuel costs.

5.10.3 The CMP will address:

- On-site management and design;
- Off-site management;
- Vehicle numbers;
- Vehicle types;
- Hours of delivery;
- Route management;
- Procurement strategy
- Operational efficiency;
- Waste management;
- Road trip reduction; and
- Targets and monitoring.

5.10.4 The CMP will be a stand-alone document but will form part of the three-part Transport Implementation Strategy.



6.0 FRAMEWORK TRAVEL PLAN

6.1 Overview

- 6.1.1 As stated in the introduction, this TA has been developed to seek to influence modes of travel to the proposed redevelopment rather than merely predicting travel patterns and providing mitigation.
- 6.1.2 The development will be supported by a three part *Transport Implementation Strategy* comprising;
- Framework Travel Plan
 - Delivery & Servicing Plan
 - Construction Management Plan
- 6.1.3 The movement of goods and materials associated with the commercial uses will clearly require transportation by road; these are addressed in the Delivery & Servicing Plan; however, the majority of journeys associated with development will be people travelling to and from the site by a range of modes of transport. These movements are covered by an over-arching Framework Travel Plan included as **Appendix C**.
- 6.1.4 The Framework Travel Plan has been prepared in accordance with the DfT document 'The Essential Guide to Travel Planning' (2008) and the DCLG guidance 'Travel plans, transport assessments and statements in decision taking' (2014).
- 6.1.5 The proposed development will provide appropriate infrastructure to encourage sustainable travel and will also provide information and incentives where practicable.
- 6.1.6 The effects of travel choices on our environment, our health and our quality of life are well documented. Sources describe how increases in road traffic have produced unsustainable levels of congestion and pollution. The effects can be felt at a local level through poor air quality, noise and busier roads and at a global level through suggested linkages to climate change. Journeys by road are becoming slower and more unreliable causing problems for business and stress to drivers.
- 6.1.7 There has been a significant increase in the proportion of individuals travelling to work by car. Over 80% of car journeys to work are driver only. Even a small modal shift in home-work-home journeys away from the car would result in a considerable reduction in traffic congestion at peak times.
- 6.1.8 Travel planning must be realistic and should not expect to remove car usage altogether. Instead, an effective travel plan will maximise the use of sustainable travel to achieve more sensible and appropriate use of the private car. If every car commuter used an alternative to the car on just one day a week, car usage levels for commuting would be reduced by as much as 20% immediately, with commuter parking requirements also reduced by up to 20%.
- 6.1.9 The site has excellent access to public transport as well as walking and cycling routes and is very well suited to promote travel by sustainable modes of transport.

7.0 TRIP GENERATION

7.1 Overview

- 7.1.1 The larger existing building is described as the former Social Club and would therefore have generated a significant number of journeys when it was fully operational. The DfT Guidance on Transport Assessment (March 2007) advises at paragraph 4.7 that baseline traffic data should be derived as follows:

Baseline transport data

- *The quantification of person trips generated from the existing site and their modal distribution, or, where the site is vacant or partially vacant, the person trips which might realistically be generated by any extant planning permission or permitted uses;*

- 7.1.2 The transport impact of the proposed development is therefore determined by comparing the journeys associated with the extant use of the site and those anticipated for the proposed use. Notwithstanding this, as the buildings have been vacant for some time the baseline will be considered to be zero for the purpose of this assessment. This is a very robust assumption.

7.2 Proposed Residential Traffic Attraction

- 7.2.1 The most current version of the TRICS database has been used to determine the predicted travel demand from the 34 flats.
- 7.2.2 Whereas the TRICS database includes data for rented flats, for a robust assessment only flats in private ownership were selected as this is known to generate slightly higher trip rates. Sites were chosen in town centre or edge of centre locations. Full TRICS data is included as **Appendix D**. The resultant vehicle trips are shown in table 7.1 below.

Table 7.1 - Multi-modal trips and mode share (TRICS data)

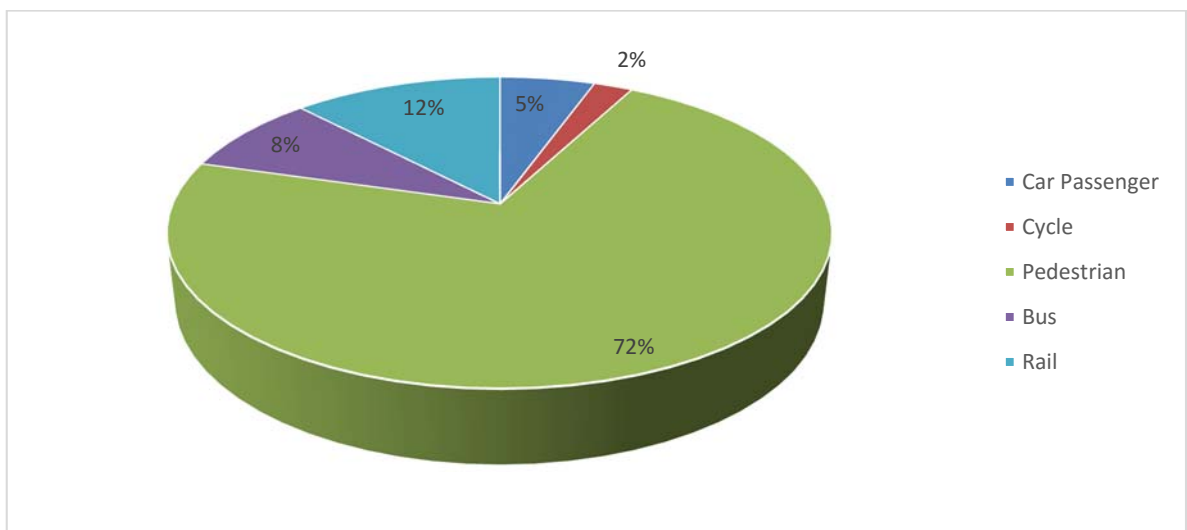
34 dwellings	Driver	Car Passenger	Cycle	Pedestrian	Bus	Rail
Trip rate	1.143	0.178	0.073	2.324	0.270	0.393
Daily trips	39	6	2	79	9	13
Mode share	26%	4%	2%	53%	6%	9%

- 7.2.3 Needless to say, as the site is designed to be car-free the TRICS data is not representative in terms of vehicle movements. If the total number of journeys remains the same then the driver trips can be redistributed to the other modes proportionately. The resultant trips and mode share are as shown in Table 7.2 below.

Table 7.2 - Multi-modal trips and mode share (adjusted)

34 dwellings	Driver	Car Passenger	Cycle	Pedestrian	Bus	Rail
Trip rate	1.143	0.178	0.073	2.324	0.270	0.393
Daily trips	0	8	3	107	12	18
Mode share	0%	5%	2%	72%	8%	12%

- 7.2.4 The predicted daily mode share expressed in Table 7.2 is illustrated in Figure 7.1 below:

Figure 7.1 – Predicted residential mode share

- 7.2.5 This predicted mode share is highly sustainable with almost three quarters of all journeys being taken on foot. It is likely that in a highly accessible location such as Gas Works Road that modes such as buses and cycling would be higher; however, the TRICS mode share provides a useful baseline from which the Travel Plan mode share targets can be set.
- 7.2.6 Importantly, irrespective of the existing uses on the site, the daily journeys by each mode could be adequately accommodated by the existing transport network without any material effect on the capacity of that mode.

7.3 Summary

- 7.3.1 The proposed re-development of the Gas Works Road site will be car-free and will therefore have no material effect on traffic flows on the local highway network. The predicted mode share will be highly sustainable, as would be expected in such an accessible location, with almost three quarters of all journeys being undertaken on foot. The proposed development would have no material effect on the capacity of any part of the transport network.



8.0 SUMMARY AND CONCLUSIONS

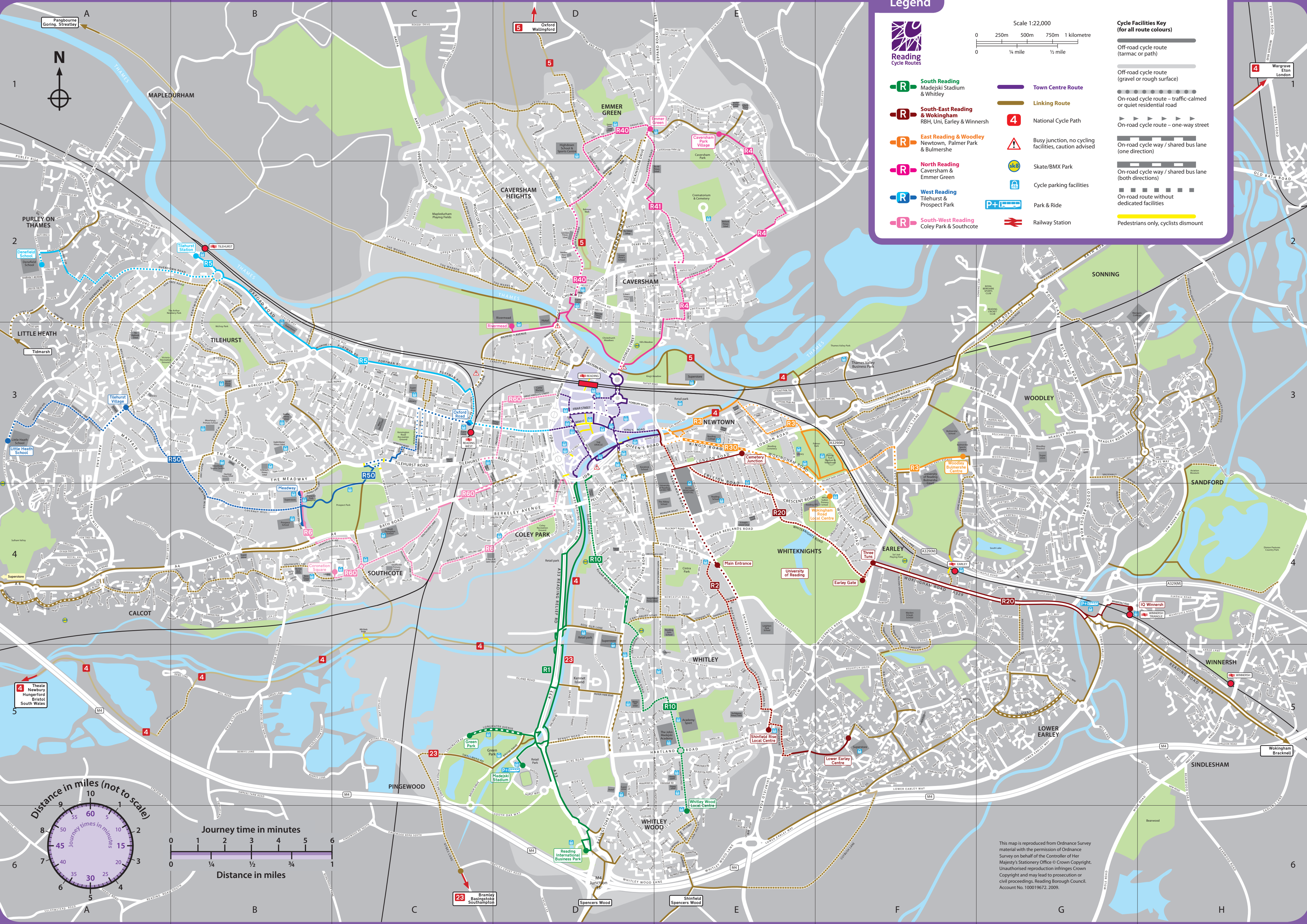
8.1 Overview

- 8.1.1 This Transport Assessment (TA) has been prepared on behalf of Galliard Homes in support of a planning application for the redevelopment of a site known as land at Gas Works Road, Reading.
- 8.1.2 The application seeks full planning permission for a residential development comprising the extension and refurbishment of two existing buildings to provide the following:
- 34 residential units (use class C3);
 - (composition: 16 x 1-bed, 17 x 2-bed, 1 x 3-bed);
 - Creation of residential amenity space;
 - Refuse collection provision;
 - 34 residential cycle parking spaces.
- 8.1.3 The site is in a highly accessible location with excellent links to public transport as well as walking and cycling infrastructure. There are few locations in Reading better suited to promoting car-free housing. The main highway corridors are subject either to urban clearways or pay-and-display restrictions. The nearest residential roads are all Controlled Parking Zones where parking is by permit only. Therefore, given the highly sustainable location of the site and the parking restrictions in the area the proposal is to implement this as a car-free development.
- 8.1.4 The development is supported by a three part Transport Implementation Strategy comprising a Framework Travel Plan, Delivery & Servicing Plan and Construction Management Plan. These will be live documents, developed in partnership with RBC, designed to influence and manage travel by all modes to the proposed development.
- 8.1.5 This report demonstrates that:
- The site is sustainably located and has excellent accessibility by non-car modes of transport.
 - The proposed development will have no effect on the highway network either during peak periods or throughout the day as a whole.
 - There would be increased use of sustainable travel modes such as walking and public transport, but the increase by each mode would have no effect on local capacity.
 - The servicing arrangements will have no material effect on local highway conditions.
- 8.1.6 Based on the above, there are no highways or transportation reasons why permission should not be granted for this development, indeed given the sustainable nature of the development we consider the highway authority should actively support the proposals.

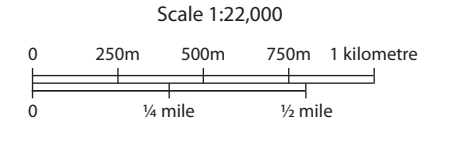


Appendix A

Cycle Map

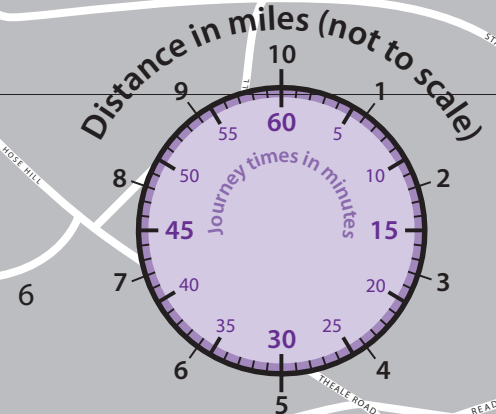


Legend



- South Reading**
Madejski Stadium & Whitley
- South-East Reading & Wokingham**
RBH, Uni, Earley & Winnersh
- East Reading & Woodley**
Newtown, Palmer Park & Bulmershe
- North Reading**
Caversham & Emmer Green
- West Reading**
Tilehurst & Prospect Park
- South-West Reading**
Coley Park & Southcote
- Town Centre Route**
- Linking Route**
- 4** National Cycle Path
- Busy junction, no cycling facilities, caution advised
- Skate/BMX Park
- Cycle parking facilities
- Park & Ride
- Railway Station

- Cycle Facilities Key (for all route colours)**
- Off-road cycle route (tarmac or path)
 - Off-road cycle route (gravel or rough surface)
 - On-road cycle route - traffic-calmed or quiet residential road
 - On-road cycle route - one-way street
 - On-road cycle way / shared bus lane (one direction)
 - On-road cycle way / shared bus lane (both directions)
 - On-road route without dedicated facilities
 - Pedestrians only, cyclists dismount



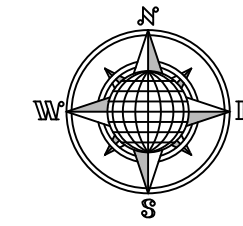
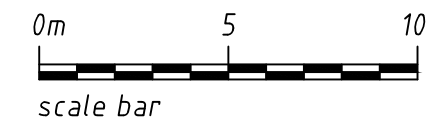
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Appendix B

Architects Plans

NOTES
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6. All dimensions shown in millimetres.
7. This drawing is the copyright of e3 design & planning consultants limited and must not be used in conjunction with any other project without e3 design & planning consultants limited written consent.



SCHEDULE OF ACCOMMODATION		
47%	16 No.	1-bed apartments
50%	17 No.	2-bed apartments
3%	1 No.	3-bed apartments
Total 34 No. apartments		



Rev.	Date	Revision



e3 design
planning & design consultants

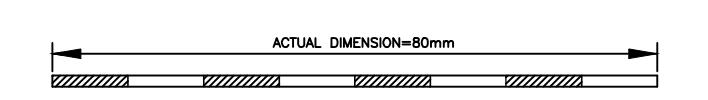
Project Title
**Land at
Gas Works Road
Reading
RG1 3EE**

Drawing Title
PROPOSED SITE PLAN

Status **PRELIMINARY ISSUE**

Scale **1 : 100 @ A1**

Date	January 2015	Drawn	Stuart Loxton
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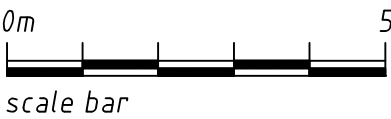
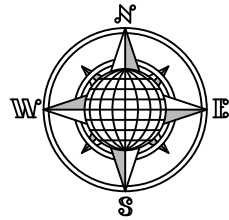
Drwg. No.	Rev.
14/354/P100	

SCHEDULE OF ACCOMMODATION

47% 16 No. 1-bed apartments
50% 17 No. 2-bed apartments
3% 1 No. 3-bed apartments

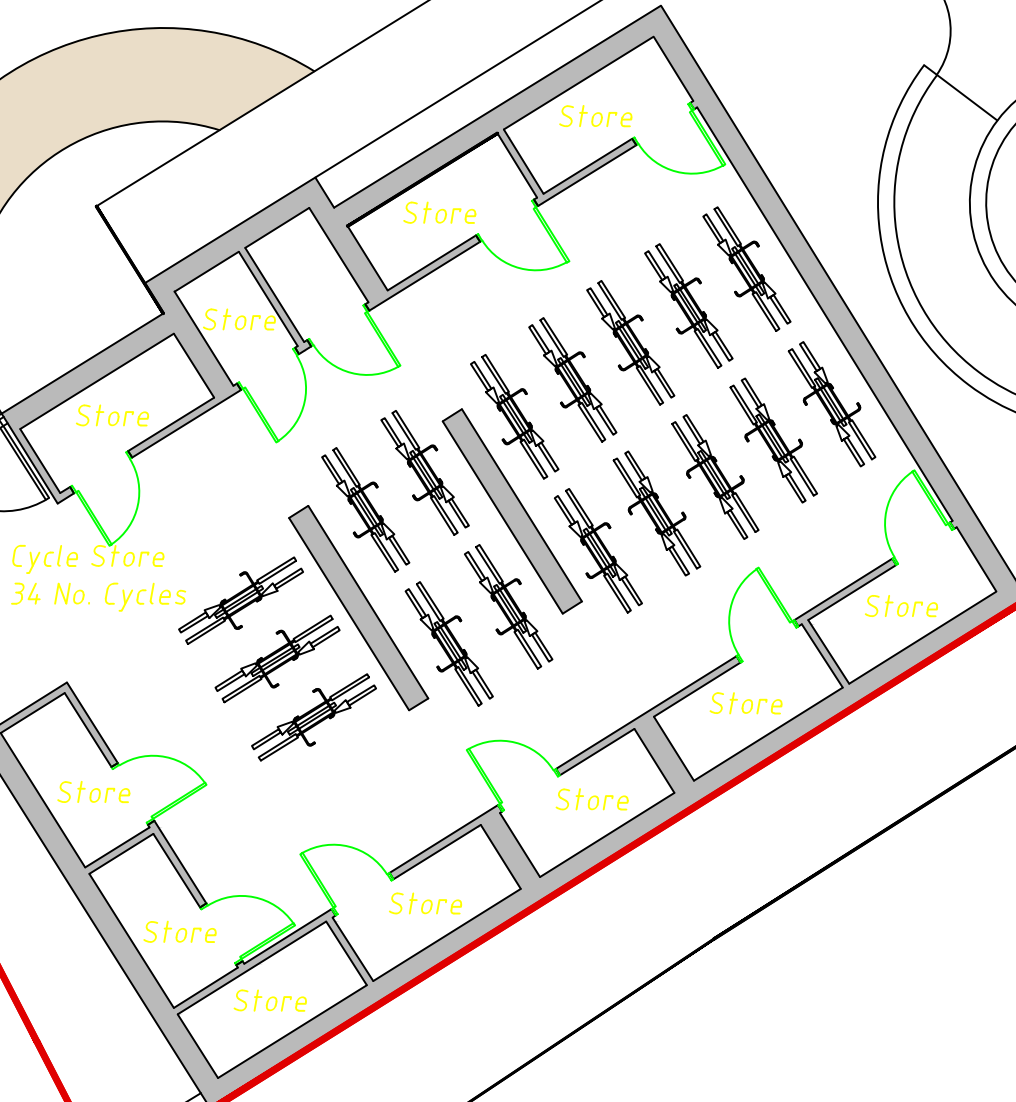
Total 34 No. apartments

- NOTES
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Site Area
651.67m² 0.0651 ha
0.161 Acres

Level 0



Rev.	Date	Revision



Project Title

Land at
Gas Works Road
Reading
RG1 3EE

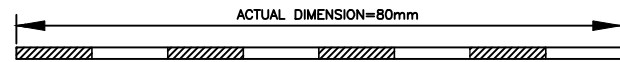
Drawing Title

PROPOSED BASEMENT PLAN
LEVEL 0

Status **PRELIMINARY ISSUE**

Scale 1 : 100 @ A2

Date January 2015 Drawn Stuart Loxton



Drwg. No. 14/354/P14	Rev.
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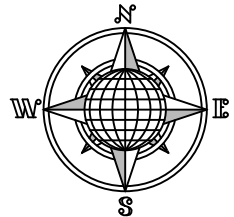
Replace existing boundary wall with new to match existing

SCHEDULE OF ACCOMMODATION

47% 16 No. 1-bed apartments
50% 17 No. 2-bed apartments
3% 1 No. 3-bed apartments

Total 34 No. apartments

- NOTES
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0m
scale bar
5

Site Area
651.67m² 0.0651 ha
0.161 Acres

Private garden to Plot 6

Existing boundary wall

Wheelchair ramp

Existing boundary wall

Rev.	Date	Revision



e3 design
planning & design consultants

Project Title

Land at
Gas Works Road
Reading
RG1 3EE

Drawing Title

PROPOSED FLOOR PLANS
LEVEL 1

Status

PRELIMINARY ISSUE

Scale

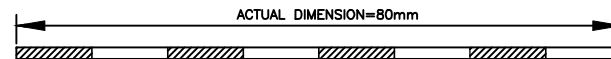
1 : 100 @ A2

Date

January 2015

Drawn

Stuart Loxton



Drwg. No.

14/354/P08

Rev.

R I V E R
K E N N E T T

Level 1

G A S
W O R K S
R O A D

Obscure glazed windows

Amenity Space
194.38 m²

Obscure glazed window

Ramp down to
Cycle Store

Obscure glazed
window

Bed 1

Bath

Hall

Kitchen

Lounge

Light well

Lobby

AC

AC

Bed 1

Kitchen

Bath

Lounge

Light well

Bed 1

Bed 2

Lounge

Hall

Bath

Lobby

Kitchen

Lounge

Bath

Bed 1

Hall

Lobby

Light well

Bed 1

Bed 2

Lounge

Bath

Kitchen

Bed 1

Hall

Bath

Kitchen

Lounge

Lobby

Bed 1

AC

Bath

Hall

Kitchen

Lounge

Light well

7

41.89 m²
442 ft²

6

41.89 m²
442 ft²

Bed 1

41.89 m²
442 ft²

3

43.91 m²
472 ft²

Lounge

4

31.66 m²
340 ft²

Lounge

1

39.14 m²
421 ft²

Kitchen

Bath

Hall

Lobby

Bed 1

2

39.14 m²
421 ft²

Lounge

5

44.72 m²
478 ft²

Lounge

6

44.72 m²
478 ft²

Lounge

7

41.89 m²
442 ft²

Lounge

8

44.72 m²
478 ft²

Lounge

9

44.72 m²
478 ft²

Lounge

10

44.72 m²
478 ft²

Lounge

11

44.72 m²
478 ft²

Lounge

12

44.72 m²
478 ft²

Lounge

13

44.72 m²
478 ft²

Lounge

14

44.72 m²
478 ft²

Lounge

15

44.72 m²
478 ft²

Lounge

16

44.72 m²
478 ft²

Lounge

17

44.72 m²
478 ft²

Lounge

18

44.72 m²
478 ft²

Lounge

19

44.72 m²
478 ft²

Lounge

20

44.72 m²
478 ft²

Lounge

21

44.72 m²
478 ft²

Lounge

22

44.72 m²
478 ft²

Lounge

23

44.72 m²
478 ft²

Lounge

24

44.72 m²
478 ft²

Lounge

25

44.72 m²
478 ft²

Lounge

26

44.72 m²
478 ft²

Lounge

27

44.72 m²
478 ft²

Lounge

28

44.72 m²
478 ft²

Lounge

29

44.72 m²
478 ft²

Lounge

30

44.72 m²
478 ft²

Lounge

31

44.72 m²
478 ft²

Lounge

32

44.72 m²
478 ft²

Lounge

33

44.72 m²
478 ft²

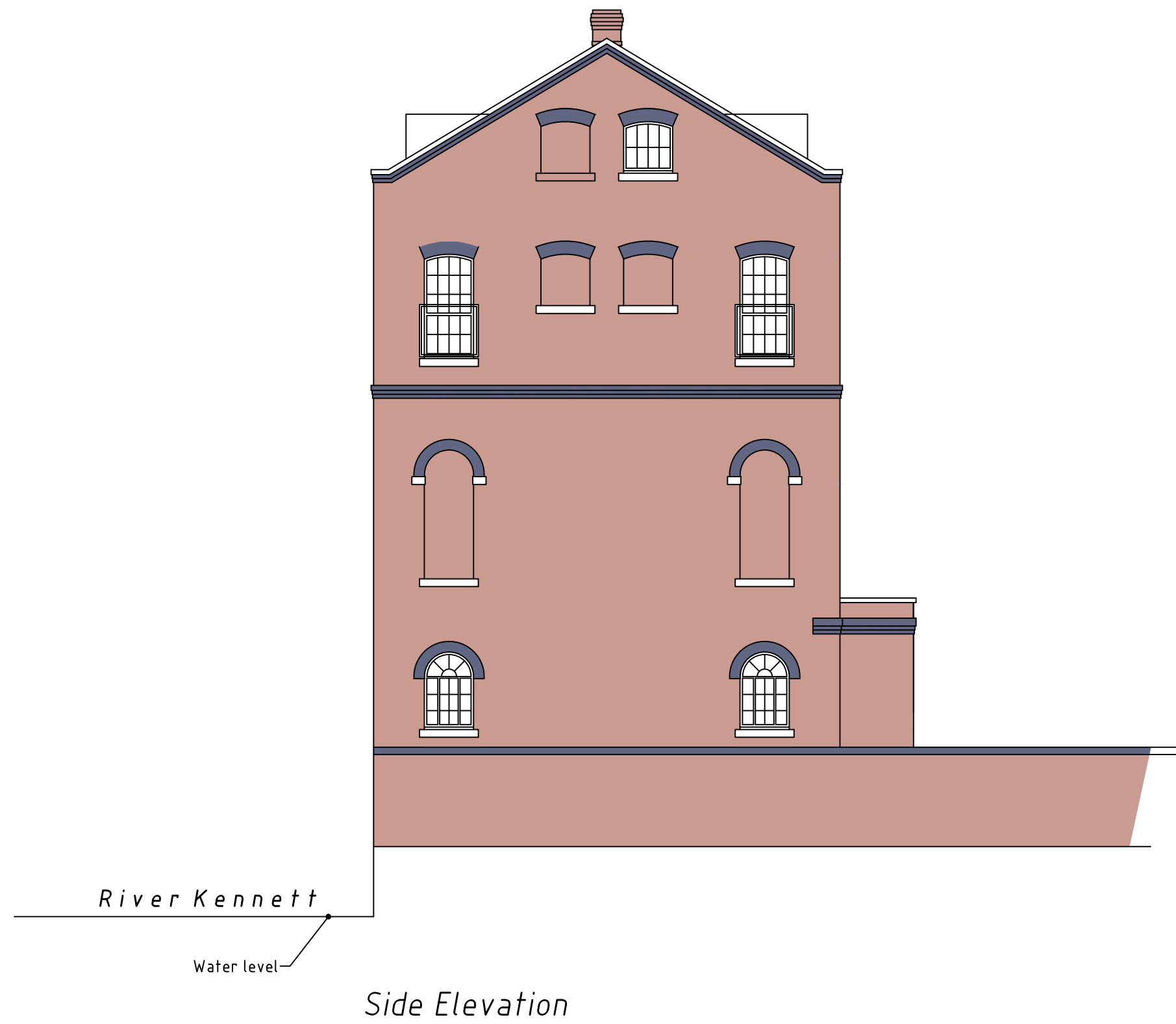
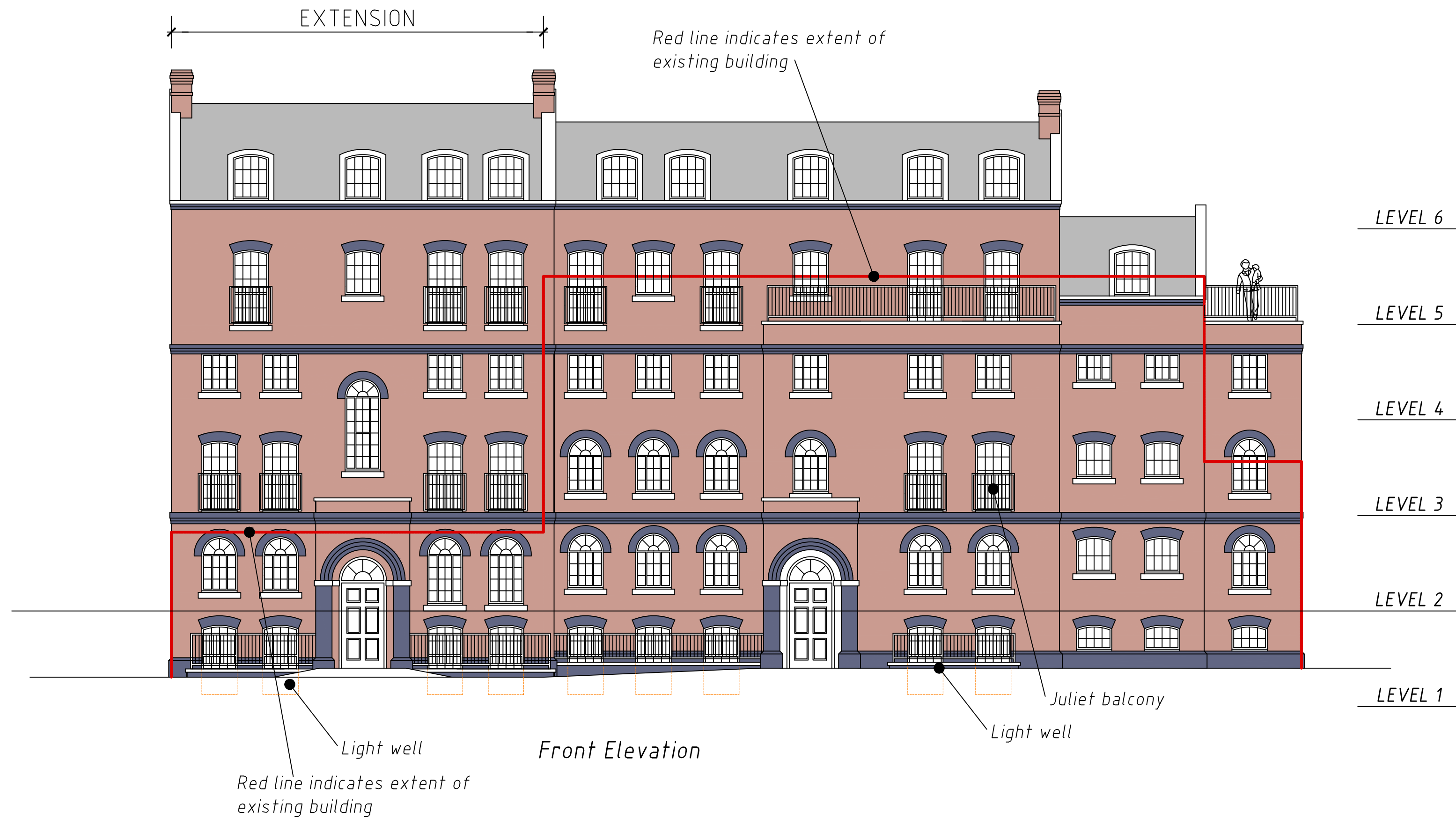
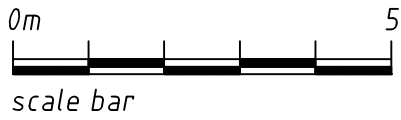
Lounge

34

44.72 m²
478 ft²

Lounge

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LEVEL 6

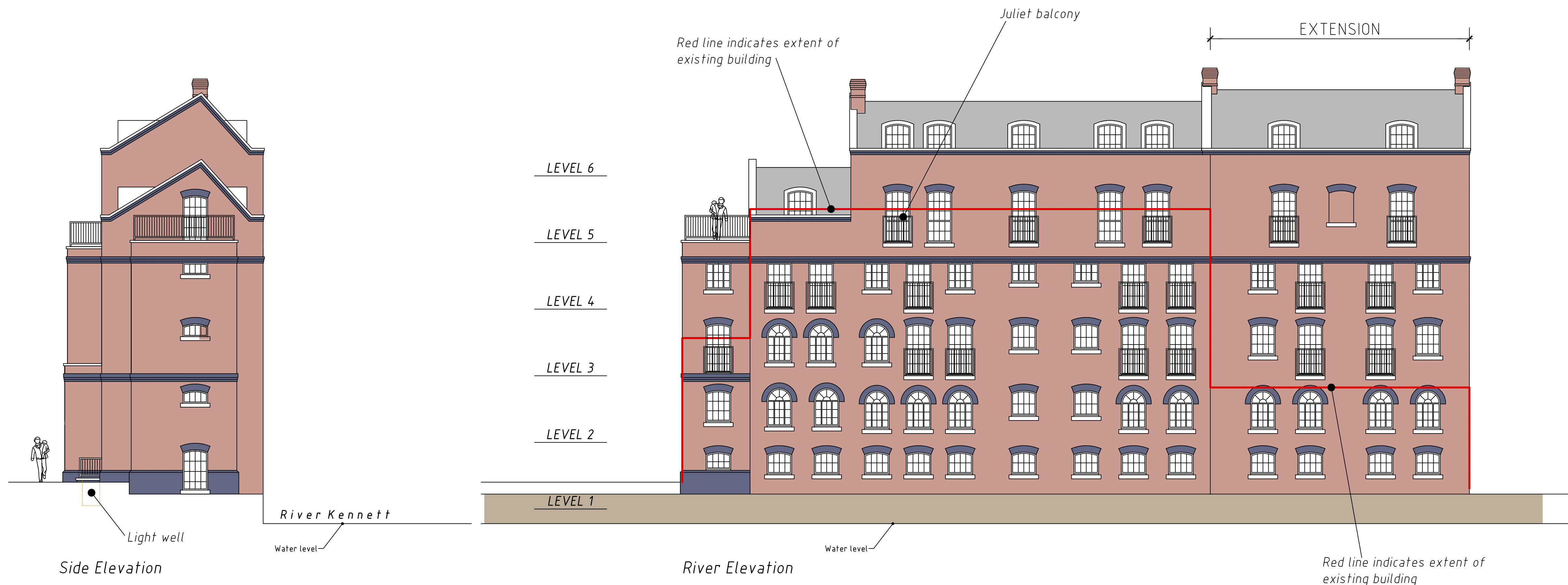
LEVEL 5

LEVEL 4

LEVEL 3

LEVEL 2

LEVEL 1



Rev.	Date	Revision
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Project Title
**Land at
Gas Works Road
Reading
RG1 3EE**

Drawing Title
**PROPOSED ELEVATIONS
BUILDING 1**

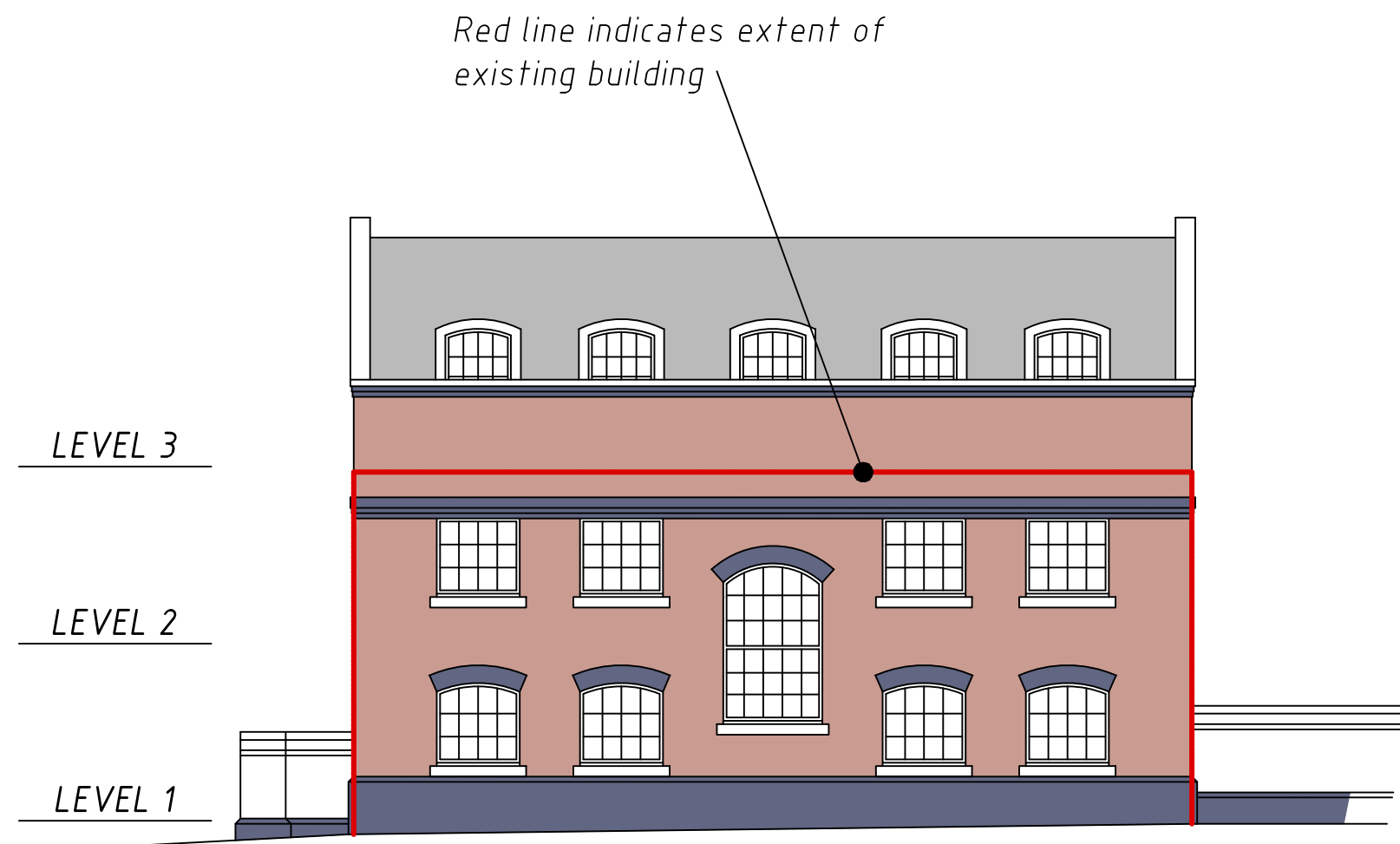
Status **PRELIMINARY ISSUE**

Scale **1 : 100 @ A1**

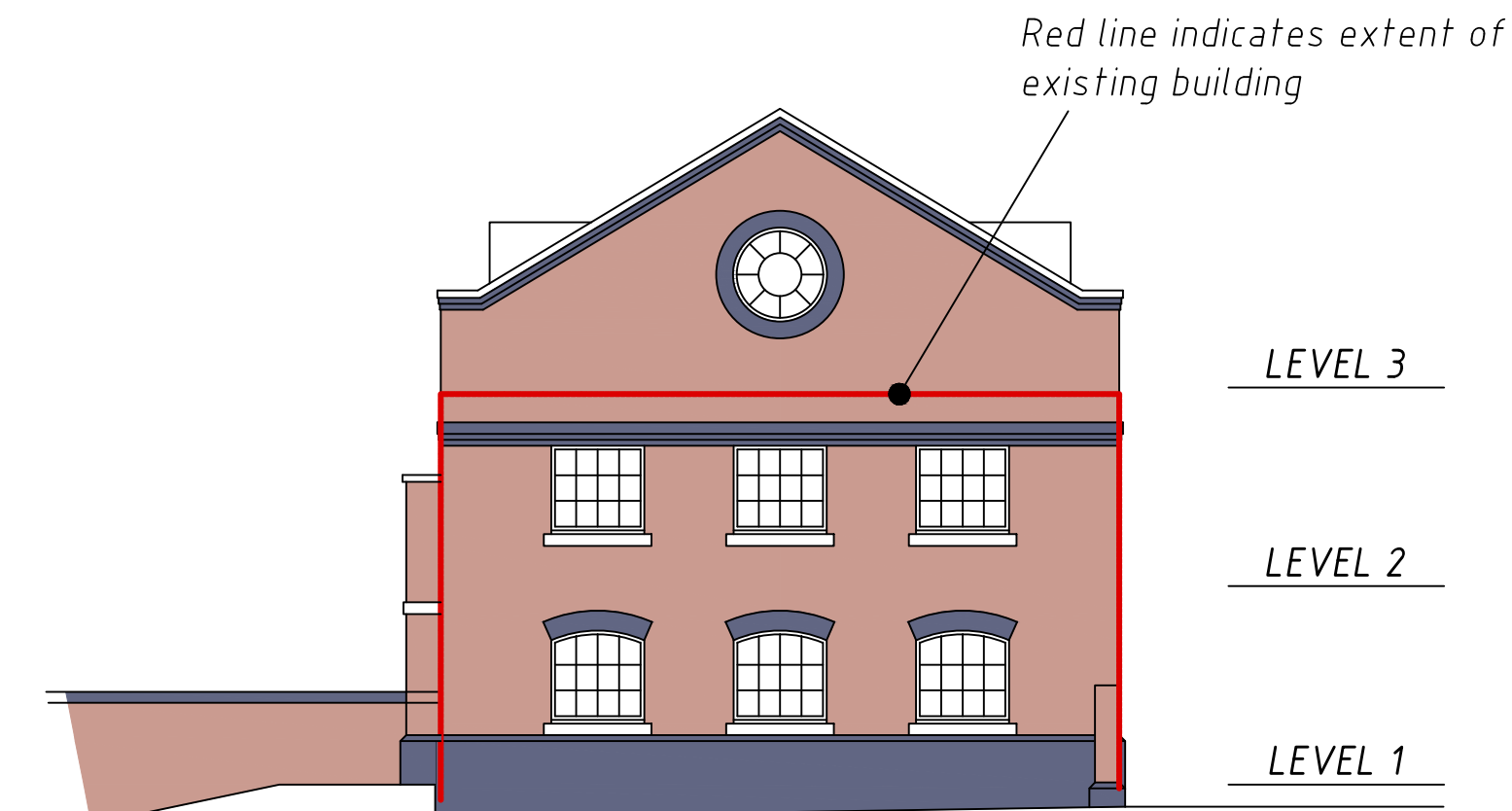
Date **January 2015** Drawn **Stuart Loxton**

ACTUAL DIMENSION=80mm

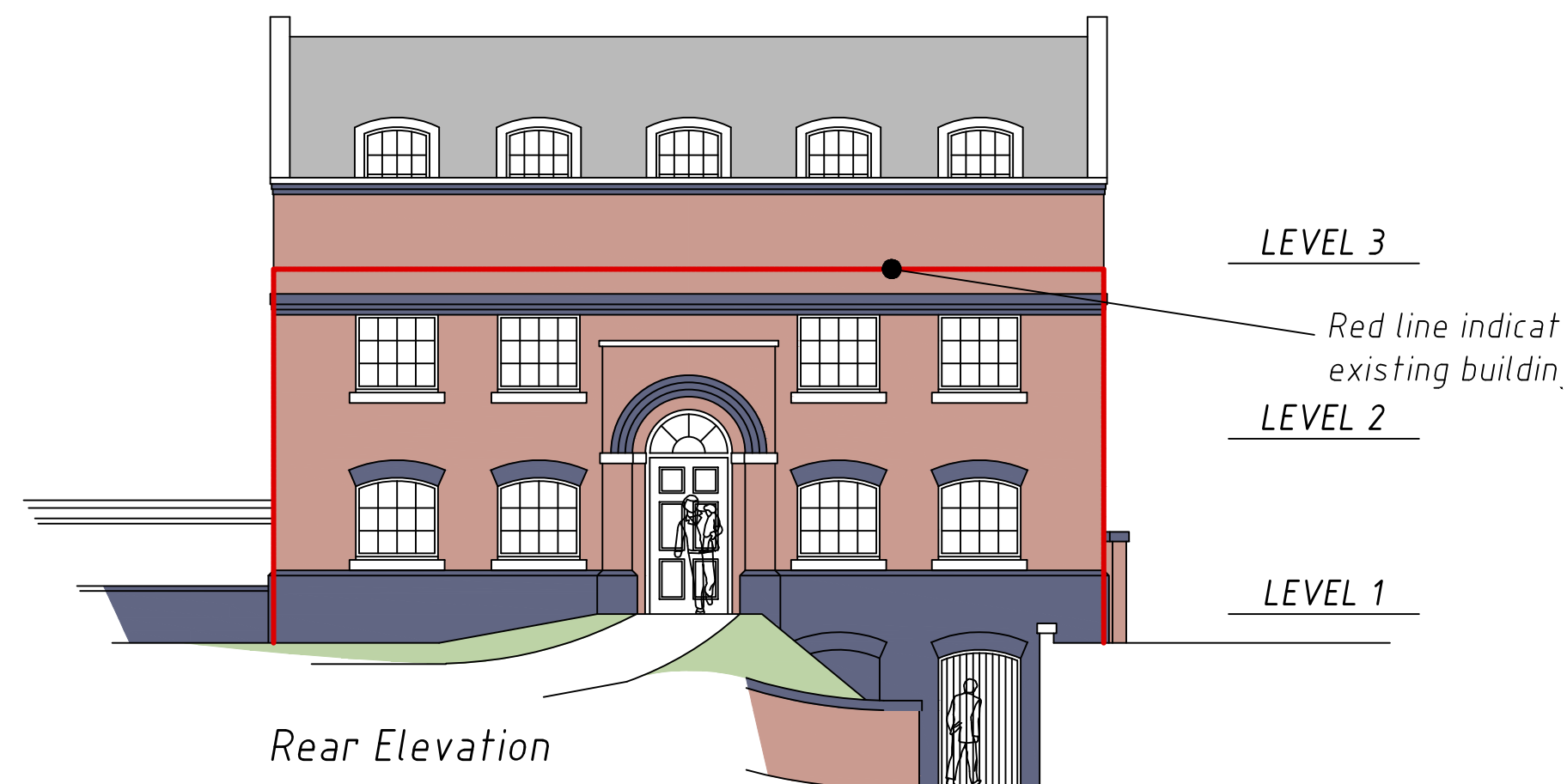
Drwg. No. **14/354/P06** Rev.



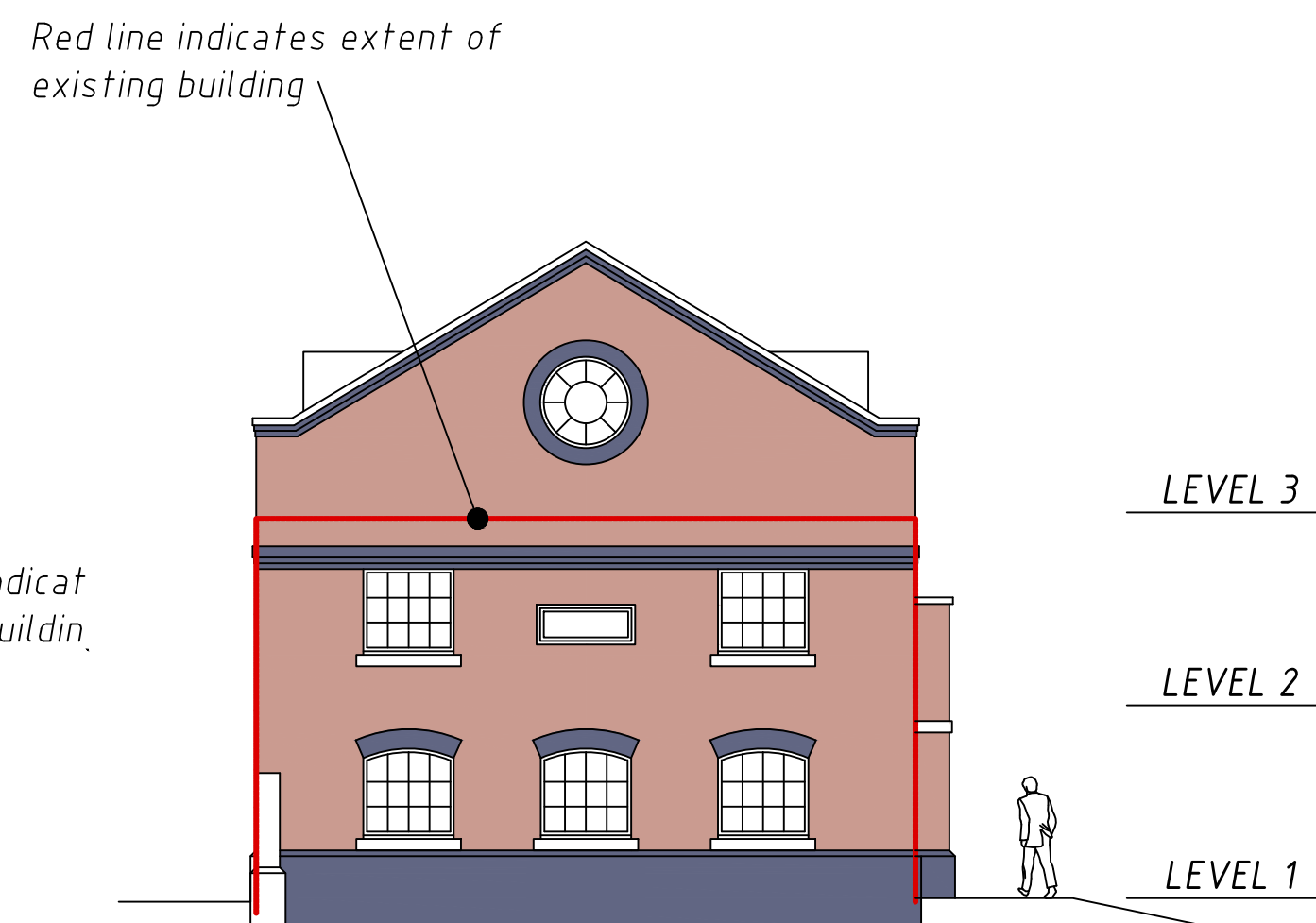
Front Elevation



Side Elevation



Rear Elevation



Side Elevation

- NOTES
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Rev.	Date	Revision



Project Title

**Land at
Gas Works Road
Reading
RG1 3EE**

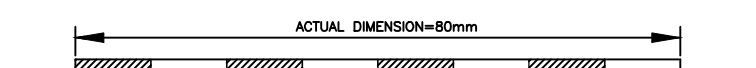
Drawing Title

**PROPOSED ELEVATIONS
BLOCK 2**

Status **PRELIMINARY ISSUE**

Scale **1 : 100 @ A2**

Date **January 2015** Drawn **Stuart Loxton**



Drwg. No.	Rev.
14/354/P07	



Appendix C

Framework Travel Plan

[Provided as a separate document]



Appendix D

TRICS Data

TRICS 7.1.1

Trip Rate P Number of dwellings

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use 03 - RESIDENTIAL
Category C - FLATS PRIVATELY OWNED
MULTI-MODAL VEHICLES

Selected regions and areas:

1 GREATER LONDON	
KI	KINGSTON 1 days
6 WEST MIDLANDS	
WM	WEST MIDL 1 days
8 NORTH WEST	
GM	GREATER N 1 days
14 LEINSTER	
WT	WESTMEAT 1 days

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

Filtering Stage 2 selection:

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

Parameter: Number of dwellings

Actual Range 60 to 154 (units:)

Range Selected 60 to 180 (units:)

Public Transport Provision:

Selection b Include all surveys

Date Range 01/01/05 to 11/05/12

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

Selected survey days:

Monday 1 days

Wednesday 1 days

Thursday 1 days

Friday 1 days

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

Selected survey types:

Manual count 4 days

Directional 0 days

This data displays the total amount whilst ATC surveys are undertaking using machines.

Selected Locations:

Town Centre 1

Edge of Town 3

Suburban / 0

Edge of Town 0

Neighbourhood 0

Free Standing 0

Not Known 0

This data displays the Edge of Town Suburban / Neighbourhood Edge of Town Town Centre and Not Known.

Selected Location Sub Categories:

Industrial Zone 0

Commercial 0

Development 0

Residential 0

Retail Zone 0

Built-Up Zone 1

Village 0

Out of Town 0

High Street 0

No Sub Category 3

This data displays Industrial Zone Development Residential Retail Zone Built-Up Zone Village Out of Town High Street and No Sub Category.

Filtering Stage 3 selection:

Use Class:

C3 4 days

This data displays which can be found within the Library module of TRICS®.

Population within 1 mile:

5,001 to 11,111 days

10,001 to 11 days

25,001 to 52 days

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

Population within 5 miles:

5,001 to 21 days

250,001 to 1 days

500,001 or 2 days

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

Car ownership within 5 miles:

0.6 to 1.0 1 days

1.1 to 1.5 3 days

This data displays within a radius of 5-miles of selected survey sites.

Travel Plan:

No 4 days

This data d and the number of surveys that were undertaken at sites without Travel Plans.

LIST OF SITES relevant to selection parameters

1 GM-03-C-0 BLOCK OF F GREATER MANCHESTER
WHITWORTH STREET W.

MANCHESTER

Town Centre

Built-Up Zone

Total Number of dwell 154

Survey date THURSDAY ##### Survey Typ MANUAL

2 KI-03-C-02 BLOCK OF F KINGSTON
SOPWITH WAY

KINGSTON UPON THAMES

Edge of Town Centre

No Sub Category

Total Number of dwell 132

Survey date MONDAY ##### Survey Typ MANUAL

3 WM-03-C-0 FLATS WEST MIDLANDS
LODE LANE

SOLIHULL

Edge of Town Centre

No Sub Category

Total Number of dwell 60

Survey date FRIDAY ##### Survey Typ MANUAL

4 WT-03-C-0 FLATS WESTMEATH
NORTHGATE STREET

ATHLONE

Edge of Town Centre

No Sub Category

Total Number of dwell 86

Survey date WEDNESDAY ##### Survey Typ MANUAL

This section it displays the selected day of and whether the survey was a manual classified count or an ATC count.

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

Calculation Factor: 1 DWELLS

Count Type: VEHICLES

Time Range	No. Days	ARRIVALS		No. Days	DEPARTURES		No. Days	TOTALS	
		Ave. DWELLS	Trip Rate		Ave. DWELLS	Trip Rate		Ave. DWELLS	Trip Rate
00:00-01:00									
01:00-02:00									
02:00-03:00									
03:00-04:00									
04:00-05:00									
05:00-06:00									
06:00-07:00									
07:00-08:00	4	108	0.012	4	108	0.058	4	108	0.07
08:00-09:00	4	108	0.025	4	108	0.12	4	108	0.145
09:00-10:00	4	108	0.039	4	108	0.049	4	108	0.088
10:00-11:00	4	108	0.023	4	108	0.021	4	108	0.044
11:00-12:00	4	108	0.037	4	108	0.03	4	108	0.067
12:00-13:00	4	108	0.019	4	108	0.035	4	108	0.054
13:00-14:00	4	108	0.039	4	108	0.051	4	108	0.09
14:00-15:00	4	108	0.046	4	108	0.037	4	108	0.083
15:00-16:00	4	108	0.053	4	108	0.044	4	108	0.097
16:00-17:00	4	108	0.051	4	108	0.058	4	108	0.109
17:00-18:00	4	108	0.097	4	108	0.044	4	108	0.141
18:00-19:00	4	108	0.093	4	108	0.063	4	108	0.155
19:00-20:00									
20:00-21:00									
21:00-22:00									
22:00-23:00									
23:00-24:00									
Daily Trip Rates:			0.534			0.609			1.143

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

Calculation Factor: 1 DWELLS

Count Type: TAXIS

Time Range	No. Days	ARRIVALS		No. Days	DEPARTURES		No. Days	TOTALS	
		Ave. DWELLS	Trip Rate		Ave. DWELLS	Trip Rate		Ave. DWELLS	Trip Rate
00:00-01:00									
01:00-02:00									
02:00-03:00									
03:00-04:00									
04:00-05:00									
05:00-06:00									
06:00-07:00									
07:00-08:00	4	108	0.002	4	108	0.002	4	108	0.004
08:00-09:00	4	108	0	4	108	0	4	108	0

01:00-02:00									
02:00-03:00									
03:00-04:00									
04:00-05:00									
05:00-06:00									
06:00-07:00									
07:00-08:00	4	108	0	4	108	0.005	4	108	0.005
08:00-09:00	4	108	0	4	108	0.007	4	108	0.007
09:00-10:00	4	108	0.002	4	108	0.012	4	108	0.014
10:00-11:00	4	108	0.005	4	108	0.002	4	108	0.007
11:00-12:00	4	108	0.002	4	108	0.002	4	108	0.004
12:00-13:00	4	108	0.002	4	108	0.002	4	108	0.004
13:00-14:00	4	108	0	4	108	0.002	4	108	0.002
14:00-15:00	4	108	0	4	108	0	4	108	0
15:00-16:00	4	108	0.002	4	108	0.005	4	108	0.007
16:00-17:00	4	108	0.002	4	108	0	4	108	0.002
17:00-18:00	4	108	0.014	4	108	0.002	4	108	0.016
18:00-19:00	4	108	0.005	4	108	0	4	108	0.005
19:00-20:00									
20:00-21:00									
21:00-22:00									
22:00-23:00									
23:00-24:00									
Daily Trip Rates:			0.034			0.039			0.073

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

Calculation Factor: 1 DWELLS

Count Type: VEHICLE OCCUPANTS

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip
Days	DWELLS	Rate	Days	DWELLS	Rate	Days	DWELLS	Rate	Days
00:00-01:00									
01:00-02:00									
02:00-03:00									
03:00-04:00									
04:00-05:00									
05:00-06:00									
06:00-07:00									
07:00-08:00	4	108	0.007	4	108	0.065	4	108	0.072
08:00-09:00	4	108	0.03	4	108	0.132	4	108	0.162
09:00-10:00	4	108	0.051	4	108	0.056	4	108	0.107
10:00-11:00	4	108	0.028	4	108	0.023	4	108	0.051
11:00-12:00	4	108	0.039	4	108	0.032	4	108	0.071
12:00-13:00	4	108	0.021	4	108	0.039	4	108	0.06
13:00-14:00	4	108	0.039	4	108	0.053	4	108	0.092
14:00-15:00	4	108	0.056	4	108	0.042	4	108	0.098
15:00-16:00	4	108	0.065	4	108	0.051	4	108	0.116
16:00-17:00	4	108	0.056	4	108	0.069	4	108	0.125
17:00-18:00	4	108	0.12	4	108	0.069	4	108	0.189
18:00-19:00	4	108	0.104	4	108	0.074	4	108	0.178
19:00-20:00									
20:00-21:00									
21:00-22:00									
22:00-23:00									
23:00-24:00									
Daily Trip Rates:			0.616			0.705			1.321

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

Calculation Factor: 1 DWELLS

Count Type: PEDESTRIANS

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip
Days	DWELLS	Rate	Days	DWELLS	Rate	Days	DWELLS	Rate	Days
00:00-01:00									
01:00-02:00									
02:00-03:00									
03:00-04:00									
04:00-05:00									
05:00-06:00									
06:00-07:00									
07:00-08:00	4	108	0.007	4	108	0.016	4	108	0.023
08:00-09:00	4	108	0.019	4	108	0.185	4	108	0.204
09:00-10:00	4	108	0.021	4	108	0.132	4	108	0.153
10:00-11:00	4	108	0.051	4	108	0.042	4	108	0.093
11:00-12:00	4	108	0.063	4	108	0.079	4	108	0.141
12:00-13:00	4	108	0.118	4	108	0.137	4	108	0.255
13:00-14:00	4	108	0.104	4	108	0.106	4	108	0.21
14:00-15:00	4	108	0.097	4	108	0.081	4	108	0.178
15:00-16:00	4	108	0.109	4	108	0.093	4	108	0.202
16:00-17:00	4	108	0.183	4	108	0.153	4	108	0.336
17:00-18:00	4	108	0.245	4	108	0.106	4	108	0.351
18:00-19:00	4	108	0.127	4	108	0.051	4	108	0.178
19:00-20:00									
20:00-21:00									
21:00-22:00									
22:00-23:00									
23:00-24:00									
Daily Trip Rates:			1.143			1.181			2.324

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

Calculation Factor: 1 DWELLS

Count Type: BUS/TRAM PASSENGERS

Time Range	No. Days	ARRIVALS		No. Days	DEPARTURES		No. Days	TOTALS	
		Ave. DWELLS	Trip Rate		Ave. DWELLS	Trip Rate		Ave. DWELLS	Trip Rate
00:00-01:00									
01:00-02:00									
02:00-03:00									
03:00-04:00									
04:00-05:00									
05:00-06:00									
06:00-07:00									
07:00-08:00	4	108	0	4	108	0.016	4	108	0.016
08:00-09:00	4	108	0	4	108	0.032	4	108	0.032
09:00-10:00	4	108	0.005	4	108	0.023	4	108	0.028
10:00-11:00	4	108	0.002	4	108	0.012	4	108	0.014
11:00-12:00	4	108	0.005	4	108	0.009	4	108	0.014
12:00-13:00	4	108	0.002	4	108	0.012	4	108	0.014
13:00-14:00	4	108	0.009	4	108	0.005	4	108	0.014
14:00-15:00	4	108	0.005	4	108	0.005	4	108	0.01
15:00-16:00	4	108	0.035	4	108	0.009	4	108	0.044
16:00-17:00	4	108	0.028	4	108	0.012	4	108	0.04
17:00-18:00	4	108	0.021	4	108	0.007	4	108	0.028
18:00-19:00	4	108	0.016	4	108	0	4	108	0.016
19:00-20:00									
20:00-21:00									
21:00-22:00									
22:00-23:00									
23:00-24:00									
Daily Trip Rates:			0.128			0.142			0.27

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

Calculation Factor: 1 DWELLS

Count Type: TRAIN PASSENGERS

Time Range	No. Days	ARRIVALS		No. Days	DEPARTURES		No. Days	TOTALS	
		Ave. DWELLS	Trip Rate		Ave. DWELLS	Trip Rate		Ave. DWELLS	Trip Rate
00:00-01:00									
01:00-02:00									
02:00-03:00									
03:00-04:00									
04:00-05:00									
05:00-06:00									
06:00-07:00									
07:00-08:00	4	108	0	4	108	0.046	4	108	0.046
08:00-09:00	4	108	0.002	4	108	0.067	4	108	0.069
09:00-10:00	4	108	0.002	4	108	0.019	4	108	0.021
10:00-11:00	4	108	0	4	108	0.012	4	108	0.012
11:00-12:00	4	108	0.005	4	108	0.021	4	108	0.026
12:00-13:00	4	108	0.002	4	108	0.016	4	108	0.018
13:00-14:00	4	108	0.005	4	108	0.012	4	108	0.017
14:00-15:00	4	108	0.012	4	108	0	4	108	0.012
15:00-16:00	4	108	0.002	4	108	0.002	4	108	0.004
16:00-17:00	4	108	0.014	4	108	0.016	4	108	0.03
17:00-18:00	4	108	0.067	4	108	0.009	4	108	0.076
18:00-19:00	4	108	0.053	4	108	0.009	4	108	0.062
19:00-20:00									
20:00-21:00									
21:00-22:00									
22:00-23:00									
23:00-24:00									
Daily Trip Rates:			0.164			0.229			0.393

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

Calculation Factor: 1 DWELLS

Count Type: COACH PASSENGERS

Time Range	No. Days	ARRIVALS		No. Days	DEPARTURES		No. Days	TOTALS	
		Ave. DWELLS	Trip Rate		Ave. DWELLS	Trip Rate		Ave. DWELLS	Trip Rate
00:00-01:00									
01:00-02:00									
02:00-03:00									
03:00-04:00									
04:00-05:00									
05:00-06:00									
06:00-07:00									
07:00-08:00	4	108	0	4	108	0	4	108	0
08:00-09:00	4	108	0	4	108	0	4	108	0
09:00-10:00	4	108	0	4	108	0	4	108	0
10:00-11:00	4	108	0	4	108	0	4	108	0
11:00-12:00	4	108	0	4	108	0	4	108	0
12:00-13:00	4	108	0	4	108	0	4	108	0
13:00-14:00	4	108	0	4	108	0	4	108	0
14:00-15:00	4	108	0	4	108	0	4	108	0
15:00-16:00	4	108	0	4	108	0	4	108	0
16:00-17:00	4	108	0	4	108	0	4	108	0
17:00-18:00	4	108	0	4	108	0	4	108	0

18:00-19:00	4	108	0	4	108	0	4	108	0
19:00-20:00									
20:00-21:00									
21:00-22:00									
22:00-23:00									
23:00-24:00									
Daily Trip Rates:			0			0			0

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
Calculation Factor: 1 DWELLS
Count Type: PUBLIC TRANSPORT USERS

Time Range	No. Days	ARRIVALS		No. Days	DEPARTURES		No. Days	TOTALS	
		Ave. DWELLS	Trip Rate		Ave. DWELLS	Trip Rate		Ave. DWELLS	Trip Rate
00:00-01:00									
01:00-02:00									
02:00-03:00									
03:00-04:00									
04:00-05:00									
05:00-06:00									
06:00-07:00									
07:00-08:00	4	108	0	4	108	0.063	4	108	0.062
08:00-09:00	4	108	0.002	4	108	0.1	4	108	0.102
09:00-10:00	4	108	0.007	4	108	0.042	4	108	0.049
10:00-11:00	4	108	0.002	4	108	0.023	4	108	0.025
11:00-12:00	4	108	0.009	4	108	0.03	4	108	0.039
12:00-13:00	4	108	0.005	4	108	0.028	4	108	0.033
13:00-14:00	4	108	0.014	4	108	0.016	4	108	0.03
14:00-15:00	4	108	0.016	4	108	0.005	4	108	0.021
15:00-16:00	4	108	0.037	4	108	0.012	4	108	0.049
16:00-17:00	4	108	0.042	4	108	0.028	4	108	0.07
17:00-18:00	4	108	0.088	4	108	0.016	4	108	0.104
18:00-19:00	4	108	0.069	4	108	0.009	4	108	0.078
19:00-20:00									
20:00-21:00									
21:00-22:00									
22:00-23:00									
23:00-24:00									
Daily Trip Rates:			0.291			0.371			0.662

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
Calculation Factor: 1 DWELLS
Count Type: TOTAL PEOPLE

Time Range	No. Days	ARRIVALS		No. Days	DEPARTURES		No. Days	TOTALS	
		Ave. DWELLS	Trip Rate		Ave. DWELLS	Trip Rate		Ave. DWELLS	Trip Rate
00:00-01:00									
01:00-02:00									
02:00-03:00									
03:00-04:00									
04:00-05:00									
05:00-06:00									
06:00-07:00									
07:00-08:00	4	108	0.014	4	108	0.148	4	108	0.162
08:00-09:00	4	108	0.051	4	108	0.424	4	108	0.475
09:00-10:00	4	108	0.081	4	108	0.241	4	108	0.322
10:00-11:00	4	108	0.086	4	108	0.09	4	108	0.176
11:00-12:00	4	108	0.113	4	108	0.144	4	108	0.257
12:00-13:00	4	108	0.146	4	108	0.206	4	108	0.352
13:00-14:00	4	108	0.157	4	108	0.178	4	108	0.335
14:00-15:00	4	108	0.169	4	108	0.127	4	108	0.296
15:00-16:00	4	108	0.213	4	108	0.16	4	108	0.373
16:00-17:00	4	108	0.282	4	108	0.25	4	108	0.532
17:00-18:00	4	108	0.468	4	108	0.194	4	108	0.662
18:00-19:00	4	108	0.306	4	108	0.134	4	108	0.44
19:00-20:00									
20:00-21:00									
21:00-22:00									
22:00-23:00									
23:00-24:00									
Daily Trip Rates:			2.086			2.296			4.382

Parameter summary

Trip rate per 60 - 154 (units:)
Survey dates: 01/01/05 - 11/05/12
Number of
Number of
Number of
Surveys made

This section followed by the total number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.