Appendices to all responses received to the Local Plan Review Pre-Publication consultation and Sustainability Appraisal
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Consultation from 8 July until 19 August 2016
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1. Tim Sturgess, Bilfinger GVA on behalf of The Lady Eleanor Holles School
2. Judith Livesey, NLP Planning on behalf of St Paul's School
3. Mark Jopling, The Teddington Society and the Friends of Udney Park Playing Fields
4. Sarah Stevens, Turleys for British Land
5. Tanja El Sanadidy, Indigo on behalf of Shepherd Enterprises Limited
6. Alison Mackay, Colliers on behalf of Greggs Plc
7. Savills on behalf of Thames Water
8. Sam Hobson, Quantum Group
9. Charlotte Gibb, St Mary's University
10. James Sheppard, CBRE on behalf of LGC Ltd
11. Robert Leadbetter, Hon. Director Hampton and Kempton Waterworks Railway, including further comments from Bryan Woodriff
12. Katharine Fletcher, Historic England – archaeological information
13. Peter Willan, Old Deer Park Working Group
14. Caroline Wilberforce, Indigo Planning on behalf of on behalf of Sharpe Refinery Service
15. Robert Deanwood, Amec Foster Wheeler on behalf of National Grid
16. Marie Claire Marsh, NLP Planning on behalf of RFU
17. Tom Sadler, Bilfinger GVA on behalf of Defence Infrastructure Organisation

Report

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The Lady Eleanor Holles School

Representations to the pre-publication Local Plan

Supporting Statement

August 2016

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Appendices

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1. Introduction

1.1 The Lady Eleanor Holles School (LEHS) is an independent school located on Hanworth Road, Hampton. It provides education to girls aged 7-18 years, spread across a Junior Department (around 180 pupils) and Senior Department (around 680 pupils). The school does not currently offer school places to younger children (aged 4-7 years).

1.2 The School Governors wish to expand the school in order to meet current (and projected future) unmet local demand for additional school places for this age group (referred to as 'pre-prep'). The preliminary expansion plans comprise the development of a new pre-prep facility at the Hanworth Road site, to provide teaching accommodation for 2-forms of entry across 3 year groups (total 120 pupils).

1.3 The current MOL designation across the majority of the site provides a policy conflict with the need to meet education needs. The purpose of this paper is to set out the planning case in support of the principle of expanding the school, and to demonstrate that exceptional circumstances exist which should be considered as part of the local plan process to proactively plan for the identified education need. The paper reviews the potential development options for expanding the school from a planning perspective. It concludes that the school is currently unable to provide a new pre-prep facility within the existing parts of the site which are excluded from the MOL. The intention is that this paper will inform representations to the emerging Local Plan to allow the LB Richmond to take forward a plan-led approach in planning for growth in advance of any early pre-application discussions with the Local Planning Authority and the preparation of detailed plans.

1.4 This paper was originally prepared in June 2013, and subsequently updated in November 2013 for the purpose of discussion with the Local Planning Authority (LPA). This update (August 2016) has been prepared for the purposes of making representations to the draft Local Plan (Pre-Publication Version) and follows our previous representations submitted in January 2016 to the scoping consultation.

1.5 It is structured as follows:

- **Section 2** describes the site;
- **Section 3** outlines the proposed development and sets out the education case;
- **Section 4** provides an overview of the relevant planning context;
- **Section 5** considers the principle of the development and the key planning issues;
- **Section 6** evaluates alternative development options; and
- **Section 7** concludes the evaluation and sets out next steps.

2. The Site

Location

2.1 The site is located in the south west of the London Borough of Richmond-upon-Thames (LBRUT) in Hampton North ward. The site is approximately 4km to the south east of Feltham, 2.5km to the west of Teddington and 4km to the south west of Twickenham.

Description

2.2 The site comprises c.9.87 hectares. It is broadly defined by the brook/stream (Longford River) to the north; the rear boundaries of residential properties on Uxbridge Road/Roy Grove to the east; Hanworth Road to the south; and the boundary with Hampton School to the west. An aerial photograph and red line boundary plan are enclosed at Appendix 1/2. A plan illustrating the existing site features is provided at Appendix 3. However, it should be noted that the school is currently preparing to implement the recent Student Gateway planning permission, which will expand its existing facilities. This is explained further below.

Existing Development

2.3 The main Senior Department school buildings are located in the south central part of the site, fronting Hanworth Road. The main school buildings are between two and three storeys in height centred around small courtyard formations. The Arts Centre is located to the east of these buildings and comprises a theatre, music department and art department.

2.4 To the north and northwest of the main school buildings, a new Student Gateway is currently under construction. The project comprises new changing and locker facilities, up to five new build classrooms, and improved sports staff offices, Activity Studio and pool viewing area.

2.5 The Junior Department is located in the north western corner of the site (which includes a separate vehicular access point onto Uxbridge Road). The main Junior Department building comprises three storeys, which is supplemented by a one/two storey rear addition. The Junior Department buildings are surrounded by lawned areas which are connected to outdoor playing facilities and the rest of the school site via a pedestrian bridge over the Longford River.

2.6 A Caretaker's 'compound' is located in the south western corner of the site. This accommodates a number of single and 2-storey structures used to store equipment, machinery and materials for the maintenance of the school. Within this area there is also an

electricity sub-station, Facilities' team workshops, as well as areas of land used for the storage of miscellaneous furniture, waste and school vehicles.

2.7 The site also accommodates six dwellings at 131, 133 and 135 Uxbridge Road (north east corner of site); 113 Uxbridge Road (Rectory Lodge) (east of site); and at 50 and 102 Hanworth Road (south of site). Each of these units benefits from separate vehicular access onto Uxbridge/Hanworth Road. The dwellings are occupied by school staff.

2.8 The site does not include any Listed Buildings and is not located within a Conservation Area. However, there are some listed buildings within the vicinity of the site, detailed further in the sections below. The site falls within Environment Agency Flood Risk Zone 1 (low risk).

Landscape

2.9 The site is relatively flat. Formal landscaped (lawned) amenity areas and tennis courts/croquet law (playing fields) are provided to the front (south) of the main Senior Department school buildings facing Hanworth Road. The remainder of the site comprises mainly playing fields with incidental areas of amenity space/landscaping, playgrounds and sports courts. The site accommodates a number of trees, however these are mainly confined to the site boundaries.

Access Arrangements

2.10 Vehicular and pedestrian access arrangements comprise three main access/egress points onto Hanworth Road and a separate access/egress point onto Uxbridge Road for the Junior Department. These are supplemented by three secondary access/egress points onto Uxbridge/Hanworth Road.

2.11 The main school car/coach park lies to the south of the main Senior Department buildings. This is supplemented by further staff and visitor parking around the Junior Department buildings.

2.12 Parent/carer pick-up/drop-off is on-street.

2.13 The site benefits from a PTAL (Public Transport Accessibility Level) rating of 2 (poor). Numerous bus services operate along Uxbridge and Hanworth Roads.

Neighbouring Development

2.14 Directly to the south of the site, a row of two storey detached residential properties face the school. Beyond these properties is a predominantly residential area. To the north of the site, beyond Longford River, there are residential properties of between two and three storeys in height which front on to Uxbridge Road.

2.15 To the east of the site, the neighbouring development on Uxbridge Road comprises two to three storey residential properties including ex-local authority housing blocks and detached properties. To the west of the LEHS site is Hampton School (buildings and playing fields), and beyond this is Hampton Academy.

Physical and Environmental Considerations

- Topography – The site is broadly flat.
- Protected Species – We are not aware of any protected species present on the site (survey work will be necessary in order to confirm this).
- Underground Utilities – The site is expected to be constrained by the presence of underground utilities infrastructure (details to be confirmed following survey work).
- Flood Risk – The site falls within Environment Agency Flood Risk Zone 1 (low risk).
- Geo-environmental – We are not aware of any ground contamination issues.
- Trees – A number of trees are present on the site. These offer amenity value but are not expected to pose a significant constraint to development.
- Noise – The school use is a noise generator and the site is located in a noise sensitive (predominantly residential) setting.

Planning Unit and Existing Lawful Use

2.16 We consider the site (as outlined on the plan at Appendix 1, including the Junior Department, Senior Department, and residential accommodation/dwellings) to function as a single planning unit at present. We consider the existing lawful use to be D1 (non-residential institution) (the staff residential accommodation is ancillary to this principal use).

2.17 Notwithstanding this, the dwellings are arguably capable of functioning as separate planning units, which is relevant to their future planning potential for alternative uses.

3. The Proposed Development

The Requirement

3.1 The development requirement is to provide a pre-prep facility with capacity for 2 forms of entry across 3 year groups (Reception, Year 1 and Year 2. This equates to 6 classes and 120 pupils). The Governors consider this to be the most appropriate solution having regard to anticipated levels of demand and in response to operational considerations.

3.2 Scott Brownrigg Architects have identified the preliminary development specification, which has been principally informed by Building Bulletin 103 (Area guidelines for mainstream schools) (2014). The specification is as follows:

- 1126sqm gross internal floorspace (comprising classrooms and ancillary accommodation) spread over 2-storeys with a minimum building footprint of 770sqm. This should be located within the Hanworth Road site but comprise a discrete facility (complete disaggregation of the pre-prep facility from the school site would not be feasible on operational grounds). This is the minimum footprint configuration required for the teaching premises.
- A total land-take of 4,880- 6,000sqm is required. This comprises the building footprint (770sqm), a hard informal social area (320sqm), a Multi-Use Games Area (730sqm), a Habitat Area (60sqmn), associated circulation/amenity space and a car pick-up drop-off area (3,000sqm). With the exception of the car pick-up/drop-off area, the area requirements quoted above are a statutory requirement for primary school buildings (as set out in Building Bulletin 103 (June 2014) and based on an assumption of 120 pupils).
- The 3,000sqm required for the parent/carer pick-up/drop-off facilities could be provided either adjacent to the building or within close walking distance. As noted above, complete disaggregation of the pre-prep facility from the main school site would not be feasible on operational grounds. However, this must take into account the safeguarding requirements of existing pupils and pre-prep pupils if the pick-up/drop-off facility is not directly adjacent to the site. Whilst it would be premature to provide a layout for this space, the land take requirement for this space has been informed by an initial review by qualified transport consultants, WSP.

The Education Case

3.3 The current shortage of school places in London is well documented; the supporting text of London Plan (2016) Policy 3.18 states that London's population is younger than other places in England and Wales, and that by 2036 the London school age population is projected to increase by 18% (paragraph 3.102). Projected population and demographic changes suggest that need is likely to continue to grow over forthcoming years, placing increasing pressure on education providers in both the state and independent sectors.

3.4 According to the Independent Schools Council, over 7% of the total number of school children in England are educated in the independent sector.

3.5 The GLA's 'Projected Demand for School Places' report (November 2015) shows that, for London as a whole, demand for state-funded primary school places is projected to increase by 60,000 pupils (8.8%) over the decade to 2024/25, and demand for independent primary

school places is projected to increase by 10,000 (9.1%) by 2019/20 (if the proportion of children attending state and independent schools remains constant).

3.6 For secondary school places, the report shows that demand for state-funded places is projected to increase by 105,000 pupils (26.5%) over the decade to 2024/25, and demand for independent school places is projected to rise by 18,000 (24%) by 2024/25.

3.7 The data from the GLA report also shows net cross border flows for independent primary and secondary schools for 2014/15. For Hampton North Ward (of which Lady Eleanor Holles School is a part), there was a net inflow of both primary and secondary school pupils into the Ward. Schools in Hampton North Ward are therefore catering for demand at both a local and a more strategic level.

3.8 The above headline data clearly demonstrates that not only is the local school-aged population likely to continue growing, but that education providers in both the state and independent sectors must increase capacity in order to cater for this demand (noting that limited/nil growth of the independent sector will further increase pressure on state schools and/or increase the need for pupils to travel further afield for their education).

3.9 The LEHS Governors wish to respond proactively to this growing need by implementing plans to expand the school. They are aware of specific existing unmet demand for pre-prep school places (on the basis of parental inquiries), which they expect to continue to grow going forwards.

3.10 Logic dictates that policy makers and decision makers at all levels should encourage the growth of the best schools in order to not only increase quantitative provision of school places but also to improve the quality of education provision. The LEHS is a very successful school. In its most recent (2014) Inspection Report, the Independent Schools Inspectorate (ISI) judged that "at all ages, pupils' achievements are exceptional both in their academic work and in their activities". In 2015 80.1% of A Level results, 90.1% of AS Level results, and 96.1% of GCSE results were A or A*. Clearly, the expansion in the number of 'outstanding' school places should be supported.

Economic Benefits

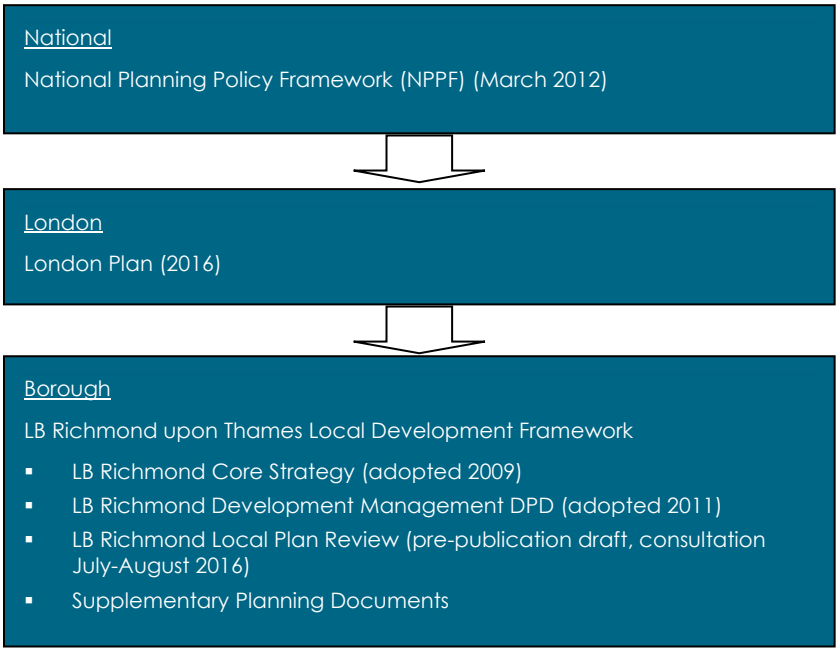
3.11 The proposed development will involve capital investment of around £3m, the generation of 40 FTE (full time equivalent) construction related jobs (calculated on the basis of industry-standard multipliers), and approximately 12 permanent teaching related jobs. Furthermore, the ability to access high quality education is a fundamental determinant of the life chances of London's children and their potential future economic output, ensuring that the scheme will contribute towards achieving short and longer term economic development objectives.

4. Planning Context

The Development Plan

4.1 In accordance with s.38(6) of the Planning and Compulsory Purchase Act (2004), planning applications should be determined in accordance with the development plan unless material considerations indicate otherwise. Accordingly, development plan and national planning policies are the starting point for establishing the potential feasibility of providing a new pre-prep facility at LEHS.

4.2 The planning policy framework for the site is outlined below:



National Planning Policy Framework

4.3 The NPPF is a material consideration in the determination of planning applications. It sets out the Government's planning policies for England and how they are to be applied. The core message of the NPPF is a '*presumption in favour of sustainable development*'.

4.4 The NPPF supports a plan-led approach and places great emphasis on the need for Authorities to have up to date plans in place. Development proposals that accord with an up to date development plan should be approved without delay. Where the development plan is absent, silent, or out-of-date, the default position is for permission to be granted, unless any

adverse impacts of granting permission would significantly and demonstrably outweigh the benefits or where specific NPPF policies indicate that development should be restricted.

4.5 From March 2013 onwards, the NPPF requires that due weight should be given to relevant policies in adopted plans according to their degree of consistency with the NPPF (the closer the policies in the plan to the policies in the framework, the greater the weight they should be given). Limited weight may also be afforded to emerging planning policies according to their stage of preparation and consistency with NPPF policies.

London Plan (2016)

4.6 The London Plan (2016) forms part of the statutory development plan affecting the site. Key policies in the London Plan of relevance to the site/proposed development are Policies 3.18 (Education Facilities), 7.17 (Metropolitan Open Land), and 3.19 (Playing Fields). The Plan includes a raft of further development management type policies that are relevant to the preparation/determination of a planning application for the site.

Richmond-upon-Thames Local Plan

4.7 The LBRUT Local Plan comprises the Core Strategy (2009) and Development Management Plan (2011). Both were adopted prior to the publication of the NPPF, therefore weight should be given to their policies according to their degree of consistency with the NPPF.

4.8 The site is not allocated for development in the Local Plan, nonetheless is affected by the following policy designations (refer to extract from the Core Strategy Proposals Map (2011) at Appendix 4:

- Metropolitan Open Land (MOL): The site is designated as MOL with the exception of an envelope of land around the existing main Senior Department school buildings, the Junior Department buildings and Rectory Lodge (113 Uxbridge Road). We note that much of this land also meets the statutory definition of playing fields. Core Strategy Policy CP10 and Development Management Policy DMOS2 appy.
- An Area Poorly Provided with Public Open Space: This designation extends from the new Student Gateway building northwards, covering the hard surface tennis courts, the junior play area and the junior school site.
- Other Site of Nature Importance: The length of the Longford River is allocated as an Other Site of Nature Importance.

4.9 Policy designations surrounding the site are also relevant for consideration, including:

- A Conservation Area is located to the east of the site, and directly south of Rectory Lodge.

- Primary Road: Uxbridge Road is identified as a Primary Road in the highways network.
- Proposed Area for Tree Planting: Hanworth Road is identified as an area proposed for Tree Planting.
- Listed Buildings: Two statutorily Grade II Listed buildings/monuments bound the LEHS site: 127 Uxbridge Road (adjacent to staff bungalows in north eastern corner); and the monument at south eastern end of General Roy's Survey Base (Roy Grove).

Richmond-upon-Thames Local Plan Review

4.10 LB Richmond is undertaking a review of the existing policies contained in the Core Strategy (2009) and Development Management Plan (2011). The Local Plan review will also progress the work already undertaken to prepare the LB Richmond Site Allocations Plan which was subsequently abandoned in favour of a new Local Plan.

4.11 The Council has undertaken an initial consultation on the scope of the review of existing policies (4th January- 1st February) and is currently consulting on the pre-publication version of the Local Plan (8th July- 19th August 2016).

4.12 On behalf of LEHS, GVA responded to LB Richmond's initial consultation on the scope of the review of existing planning policies to recommend that the need for places at independent schools, as well as state-funded schools, is addressed. In the context of increasing pressure on school places and the policy support (at all levels) for the provision of education facilities, GVA's representations also requested a review of the Metropolitan Open Land boundary and the addition of an exception clause to Policy DM OS2 (MOL) for education uses where it can be demonstrated that there is a clear need for development.

4.13 The pre-publication version of the Local Plan includes the following draft policies, relevant to the site:

- Draft Policy LP29 (Education and Training)
- Draft Policy LP13 (Metropolitan Open Land)

4.14 The following sections of this report provide further justification in support of our previous representations to this consultation.

Planning History

4.15 The site has been subject to various planning applications over recent years, including minor applications for cycle storage, garages, temporary classrooms, children's play equipment and variation of conditions. The site has also been subject to a number of applications for extensions to provide additional teaching space, including classrooms and a sports hall.

Appendix 6 of this report provides a summary of the key planning applications related to the site.

4.16 The most significant recent planning applications are for the new arts centre, theatre and music facility (approved in 2010) and the Student Gateway Building, (approved in 2015). The new arts centre is complete and in use. LEHS are currently preparing to implement the planning permission for the Student Gateway Building.

Application Reference	Description	Decision (date)
08/1128/FUL	Erection of temporary classroom accommodation in the form of duplex 'portacabin' single storey structure for a five year period.	28th May 2008
10/0227/FUL	New Arts Centre and new Theatre, new Music Department and new Art Department and general teaching rooms. Refurbishment of existing dining room and Drama Department. New secondary entrance area and public frontage. Demolition of the existing Art Department and VI Form common room building. Associated landscape works. New building to form extension to the school's existing building.	30th April 2010
15/3128/FUL	Extension and works to existing buildings with associated landscaping works.	24th September 2015
15/5139/FUL	Erection of temporary classroom accommodation in the form of a duplex 'portacabin' single storey structure for a temporary period of two years.	28th January 2016
13/1693/VRC	Temporary planning consent for the portacabin is due to expire on 28th May 2013. Lady Eleanor Holles School requires an extension of time limit for the temporary consent to allow the portacabin to be used as a classroom for an additional 3 years. – To alter the condition wording to allow the temporary portacabin use for a further 3 years we propose to vary condition U20968 to read: 'This permission be for a limited period of an additional 3 years only, beginning with the date of this permission, when the buildings and works carried out under this permission shall be removed and the land reinstated to its formed condition to the satisfaction of the Local Planning Authority'.	16th July 2013
15/3128/NMA	Non-material amendment to planning approval 15/3128/NMA to allow for internal configuration to swimming changing rooms and access to existing pool remove existing internal stair; re-configure pupil toilets 1, 2 and 3; reconfigure design technology ancillary rooms and kitchenette area. External changes involve reconfigure doors to changing rooms and foyer to be moved/addition of ramps and step access to refurbished part of building. Addition of new steps/access to existing pool to match existing. Addition of plant related storage to west elevation. Fenestration changes to east and west facades. Addition of metal louvres to roof to screen plant. Changes to layout of hard landscape and car park area. Number of car parking spaces to remain as approved.	22nd July 2016
16/3117/FUL	Installation of gate to an existing vehicular crossover.	In progress

Comparables

4.17 We have included (at Appendix 7) details of recent planning applications where a Metropolitan Open Land designation was a key issue in order to highlight the principal relevant considerations in the interpretation of policy. Headline details are set out below:

Applications in LBRUT for Educational Uses within or Adjacent to MOL

4.18 Appendix 7, Table 1 provides details of planning applications within LBRUT for additional educational facilities within or adjoining land allocated as MOL. The key messages from this review are that:

- Several planning applications for development of education floorspace on land adjacent to land designated as MOL have been approved; and
- Planning applications for development on land designated as MOL have been found to be acceptable by the LPA (and approved) where very special circumstances to justify an exception to the standard policy position can be demonstrated.

4.19 An application at Christ's School East was granted planning permission in 2013. Despite the site falling within MOL, the Council considered it most appropriate to extend the existing school, rather than provide wholly new sites to meet the identified education need (which would have a greater impact on the local community). In this instance, the whole of the school site is located within MOL, apart from a very tight boundary around the existing school building, and therefore it was not physically possible to locate the new building anywhere on the site other than in the MOL. The most discreet location, close to the existing built envelope was pursued by the applicant following discussions with the Council.

Applications in LBRUT Considered as Exceptions to MOL Policy

4.20 Appendix 7, Table 2 sets out details of other applications where the Council has considered there to be an exception to MOL policy. These applications are generally of a small scale or supporting existing outdoor uses and therefore considered to be acceptable and without detrimental impact on the openness of the MOL.

Comparable Appeal Decisions Regarding MOL

4.21 The application for a new sports hall at Harrodian School, which was appealed, was refused because the Council considered that the scale of the proposal was inappropriate and very special circumstances to justify the development had not been provided.

4.22 The appeal was dismissed on 20th September 2015. On balance the proposed location of the Sports Hall was not considered to outweigh the harm to the MOL. However, in recognising the

need for the development, the Inspector drew attention to whether there were alternative locations within the school grounds where the Sports Hall would have a more limited effect on the openness. It is noted that the Council had suggested an alternative location during the appeal, but this could not be considered at the time.

4.23 Following the appeal decision it is clear that the Council has proactively engaged with the Harrodian School in order to positively plan for growth to meet its needs through the proposed revisions to the MOL boundary which are identified as part of the current consultation on the Local Plan. It should be recognised that the LEHS shares the same site characteristics in that there is a cluster of buildings that can be clearly distinguished from the predominantly open character of the remainder of the site. Whilst there is an envelope of land excluded from the MOL, the following sections of this report demonstrate that the school cannot accommodate the proposed development within these locations. Therefore, proactive engagement is sought with the Council to discuss a revision to the MOL boundary, following good planning practise to plan for future need through the development plan.

4.24 Outside of the borough, the most comparable (pre-NPPF) appeal decision is for St Dominic's Sixth Form College in Harrow (appeal ref APP/M5450/A/03/1117712), which sought consent for a new education block, detached from the existing college buildings. Part of the college site was designated as MOL, and the proposed block was located close to the edge of the MOL. In assessing the impact of the proposed development on the openness of the MOL, the Inspector considered that 'such an assessment should be made in the context of the whole area of MOL within the College's grounds. In this case, the relevant area is extensive…this would affect only a small fraction of the entire boundary of MOL within the site'. In addition the existing college buildings were considered to provide a built up backdrops to views from the MOL over the intended site of new building.

5. The Principle of Development and Key Planning Issues

The Principal Matter

5.1 The principal planning matter (which outweighs all other matters) is the Government's presumption in favour of sustainable development established in the NPPF, which includes specific support for new schools (at paragraph 72):

> The Government attaches great importance to ensuring that a sufficient choice of school places is available to meet the needs of existing and new communities. Local planning authorities should take a proactive, positive and collaborative approach to meeting this requirement, and to development that will widen choice in education. They should:
>
> - give great weight to the need to create, expand or alter schools; and
> - work with schools promoters to identify and resolve key planning issues before applications are submitted

5.2 The NPPF position is reflected in London Plan Policy 3.18 which supports the provision of new education facilities and improved education choice, in particular proposals that address the current projected shortage of primary school places which '*will be particularly encouraged*'. The policy advises that '*proposals for new schools should be given positive consideration and should only be refused where there are demonstrable negative local impacts which substantially outweigh the desirability of establishing a new school and which cannot be addressed through the appropriate use of planning conditions or obligations*'.

5.3 This positive/supportive policy position is carried forward at the local level, specifically in the borough's Core Strategy (Policy CP18) which seeks to maximise the potential of existing education sites. The borough's emerging Local Plan further embraces the supportive policy position (Policy LP29) and encourages the provision of education facilities and services for all age groups. It recognises the contribution that the independent sector makes to education provision and the LEHS support this positive emerging change.

5.4 Clearly, the principle of the development is acceptable in planning terms. Determining whether a proposal is fully acceptable in planning terms will be subject to demonstrating that there is no harm (impacts) that substantially outweighs the benefits of creating additional school places.

Further Relevant Matters

Land Use

5.5 The proposals do not constitute a change of use, therefore there are no land use issues.

Metropolitan Open Land (MOL)

5.6 The majority of the LEHS site is designated as MOL, excluding an envelope of land around the existing main school buildings, the junior school site and Rectory Lodge (113 Uxbridge Road).

5.7 The Metropolitan Open Land designation is established in the London Plan. Policy 7.17 requires planning authorities to protect land designated as MOL from inappropriate development other than in exceptional circumstances (affording such land the same level of protection as Green Belt). Appropriate development is defined as small scale structures to support outdoor open space uses that avoid adverse impacts on the openness of the MOL, and/or the replacement of existing buildings provided the new building is not materially larger than the one it replaces (all other development is 'inappropriate').

5.8 At the local level, the LBRUT Local Plan adopts a consistent policy stance to the London Plan. Core Strategy Policy CP10 states that the LPA will protect and enhance the open environment, with Metropolitan Open Land 'safeguarded and improved for biodiversity, sport, recreation and heritage, and for visual reasons'. Policy DMOS2 provides further detail, specifically in respect to MOL, stating that the LPA recognises that there may be exceptional cases where appropriate development, such as small scale structures is acceptable, but only if:

- It does not harm the character and openness of the MOL; and
- It is linked to the functional use of the MOL or supports outdoor open space uses; or
- It is for essential utility infrastructure and facilities, for which it needs to be demonstrated that no alternative locations are available and that they do not have any adverse impacts on the character and openness of the MOL.

5.9 Policy DMS02 also seeks to protect the openness of MOL from impacts associated with development on adjacent land.

5.10 Emerging Local Plan Policy LP13 also seeks to protect and retain Metropolitan Open Land in predominantly open use. Paragraph 5.2.6 acknowledges that it may be acceptable to re-distribute the designated open land within a site, where a comprehensive approach can be taken).

5.11 Whilst we recognise that the proposed policy is consistent with the London Plan, the emerging protectionist policies should be considered in the context of the firmly pro-development policies relating to education facilities discussed above, which gives rise to a strategic policy conflict. There is clear planning policy support for the provision of additional school accommodation, however, the majority of undeveloped land within school sites in LBRUT and

much of London (onto which schools could logically physically expand) is protected from development by MOL designation. This places a significant constraint on the potential to develop new school accommodation and the ability to implement policies relating to this.

5.12 It is our view that there is a logical in-principle strategic planning case to justify the release of MOL on school sites to accommodate new school buildings where need can be demonstrated and where it is evident that the development potential of land not designated as MOL has been optimised.

5.13 Accordingly, it is our view that a 'sequential' approach should be taken to this matter, with land not designated as MOL optimised in the first instance before developing on land designated as MOL. The exception to this would be the replacement of existing buildings within MOL which would also be acceptable (providing the new building would not have a greater adverse effect on the openness of the MOL than the building it replaces (by way of its scale/bulk/siting)). We have therefore undertaken a sequential site assessment which is detailed further in Section 6.

Playing Fields

5.14 A large proportion of the site comprises land that meets the statutory definition of playing fields. This land is subject to policy protection from development under the provisions of the NPPF, London Plan (Policy 3.19), the LBRUT Local Plan, and the emerging Local Plan.

5.15 Relevant polices allow for the loss of playing fields (to make way for development) only where an assessment has been undertaken which has clearly shown that the playing field land is surplus to requirements or that the loss resulting from the proposed development would be replaced by equivalent, or better provision in terms of quantity and quality in a suitable location, or the development is for alternative sports and recreational provision (the needs for which clearly outweigh the loss).

Historic Assets

5.16 The site is adjacent to the Grade II Listed 127 Uxbridge Road. Development should avoid adversely affecting the setting of this building.

Loss of Existing Housing

5.17 The site accommodates 6 dwellings that are occupied by school staff. One of the NPPF's core aims is to increase the supply of housing in the UK which is reflected in Development Plan policies that seek to resist the loss of housing (London Plan Policy 3.14). Accordingly, development on the site should seek to avoid the loss of the existing staff housing.

Accessibility

Pedestrian and Cyclists

5.18 At this stage it is assumed that the proposed development will be able to use existing pedestrian and cyclist access arrangements.

Public Transport

5.19 The site benefits from a PTAL rating of 2. While it is some distance from the nearest rail station, the site is served by numerous bus routes in Uxbridge/Hanworth Road. These existing arrangements are considered adequate to support the proposed development.

Vehicle Access and Highway Safety

5.20 There are numerous existing vehicle access/aggress points onto the site from Uxbridge/Hanworth Roads via which satisfactory vehicular access onto the site is currently achieved. At this stage it is assumed that vehicular access to the pre-prep facility will be via these existing provisions. The potential for an increase in vehicle movements using any of the access points would need to be informed by a highway safety assessment at the planning application stage. Effective site-wide travel planning can be used to ensure limited net change in trip rates. Consequently, at this stage we consider that existing access arrangements are capable of adequately supporting the development.

Traffic Impact

5.21 The potential for a change in vehicle trip rates and patterns as an impact of the proposed development will need to be assessed at the planning application stage. As noted above, at this stage we consider that any impacts can be controlled through effective travel planning plus mitigation measures (as/if necessary) and therefore we do not consider this to be a significant constraint to development.

Parent/Carer Pick-up Drop off

5.22 We are advised by the School that Hanworth Road currently suffers from car parking stress at the beginning and end of the school day, associated with parents/carers picking-up/dropping-off pupils. This has associated traffic congestion and pedestrian movement impacts. These conditions are typical of the majority of UK schools.

5.23 It is recognised that the proposed pre-prep facility risks worsening this situation. Potential impacts can be controlled by effective travel planning and mitigation measures (such as off-street pick-up/drop-off facilities). Therefore we do not consider it to be a barrier to development. Furthermore, an initial study has been undertaken to review the potential to improve the management of coach drop-off by bringing this on to the site as this is within LEHS

control. This would result in improved highways movements along Hanworth Road which would also be a material consideration

Car Parking

5.24 No staff car parking is proposed (staff will have access to existing parking spaces).

Neighbour Amenity (Potential for Nuisance)

5.25 The site is surrounded on three sides by residential properties. To the north and east residential properties back directly onto the LEHS site, whilst properties to the south of the site front on to Hanworth Road, which fronts the LEHS site. As such, the amenity of residential neighbours must be considered in the development of land for a new pre-prep facility.

5.26 Key considerations in the development of a suitable pre-prep facility scheme will be the need to ensure adequate levels of privacy are maintained and to avoid excessive noise impact. At this stage we assume that these matters can be dealt with via appropriate siting and design of the proposed development.

Urban Design

5.27 Planning policies require that new development should be of the highest design standard based on sustainable design principles. Development is required to be inclusive, respect local character (including the nature of a particular road), and connect with, and contribute positively to, its surroundings (based on an understanding of site and site context).

5.28 Key design issues which will need to be adequately addressed through the design process for the pre-prep facility include:

- Compatibility with local character (including existing townscape, frontages, scale, height, massing, proportions and form);
- Sustainable development and adaptability;
- Layout and access;
- Space between buildings and relationship to public realm; and
- Detailing and materials.

5.29 The design and development of a pre-prep facility should also take into consideration the impact of the development on neighbouring Listed Buildings (127 Uxbridge Road and Monument at Roy Grove).

Environmental/Technical

5.30 Key environmental constraints include the Longford River which runs along the northern boundary of the site, which is allocated as an 'other site of nature importance'. The LBRUT seeks to safeguard and enhance other sites of nature importance, and biodiversity enhancements will be safeguarded and enhanced, particularly along river corridors. Accordingly, development should ensure no adverse impacts on Longford River.

5.31 Development should not have an adverse impact on trees, in particular the old oak tree to the east of the main school buildings and any trees subject to a Tree Preservation Order. An Arboricultural Assessment should be undertaken where development of a pre-prep facility would impact on existing trees.

5.32 There are no known insurmountable environmental/technical constraints at this stage, nonetheless this will require testing as part of the detailed design stage.

Summary of Key Planning Principles

5.33 The following bullet points summarise the key planning considerations that should drive the preparation of plans for the pre-prep facility (effectively a set of 'guiding principles'). These highlight a number of policy conflicts which will need to be dealt with through design and via negotiations with the Local Planning Authority.

- The principle of expanding the school is firmly supported by planning policy. A planning application should be approved unless there are demonstrable local impacts which substantially outweigh the desirability of establishing a new school.
- Land not designated as MOL should be developed before land that is designated as MOL.
- Existing playing fields should be protected from development.
- The loss of existing staff housing should be resisted.
- Vehicular access to be via existing arrangements in the first instance (the acceptability of any change to be subject to highway safety assessment). Additional vehicle trip-rates to be minimised via effective travel planning, with mitigation required if unavoidable. Nil/limited increases to on-site car parking. Parent/carer pick-up/drop-off facilities to be planned for as part of scheme development.
- High quality design required that 'designs-out' the risks of neighbour amenity conflicts and ensures that development makes a positive contribution to local townscape value.
- Development should avoid adversely affecting the setting of listed buildings.

6. Options Evaluation

6.1 As identified in Section 5, there is a current strategic policy conflict between protectionist MOL policy and firmly pro-development policies relating to education facilities. There is clear planning policy support for the provision of additional school accommodation; however, the majority of undeveloped land within school sites in LBRUT including LEHS (onto which schools could logically physically expand) is protected from development by MOL designation. This places a significant constraint on the potential to develop new school accommodation and the ability to implement policies relating to this.

6.2 It is our view that there is a logical in-principle strategic planning case to justify the release of MOL on school sites to accommodate new school buildings where need can be demonstrated and where it is evident that the development potential of land not designated as MOL has been optimised.

6.3 Accordingly, it is our view that a 'sequential' approach should be taken to this matter, with land not designated as MOL optimised in the first instance before developing on land designated as MOL.

6.4 Therefore, the purpose of this section is to identify potential locations for the pre-prep facility, and then to evaluate each option having regard to their suitability for the required development (see specification in Section 3) and their compatibility with the guiding planning principles outlined in Section 5.

6.5 Eight alternative sites have been identified (see Figures 6.1/6.2). A proforma has been completed for each site (as set out on the following pages) which includes a scoring mechanism (weighted in line with planning priorities) to enable the identification of a preferred option. The proformas should be read in conjunction with the feasibility plans prepared by Scott Brownrigg Architects (see Appendix 8).

Figure 6.1 Site Plan Showing Potential Locations for Pre-prep

Figure 6.2 Aerial Photograph Showing Potential Locations for Pre-prep

Proforma of Sites

Site 1 – Junior School Playground

Assessment Criteria	Comment	Score
1. Suitability		
i. Site Size	The existing playground areas extend to approximately 0.1ha. The site is capable of accommodating the required buildings and facilities on an area of approximately 3623sqm. However, it is not sufficient to accommodate on-site pick up/drop off facilities, and there is no existing within a suitable distance. As a result this would give rise to a safeguarding conflict. Therefore the site cannot be deemed suitable in terms of its size.	0/10
ii. Available for Development (existing use/function)	Yes, subject to re-provision of Junior School playground facility (essential).	5/10
iii. Physical/Technical Constraints	Flat site. Adjacent to River Longford (although identified as Flood Risk Zone 1). No known physical/technical constraints.	8/10
iv. Accessibility (pick-up/drop-off)	Good pedestrian/cycle access from Uxbridge Road via Junior School and Hanworth Road (via Senior School). Bus services operate along both roads (bus stops in close proximity to school entrance). Insufficient space to increase capacity of Junior School car pick-up/drop-off facilities to cater for pre-prep. Car pick-up/drop-off arrangements will need to be provided by 're-allocation' of existing on-site parking areas or provision of a new pick-up/drop-off facility or close to the pre-prep facility. There is no vehicle access to this location and it would not be possible to facilitate vehicle access without conflicting with safeguarding.	2/10
v. Relationship to Existing School Facilities	A pre-prep in this location would be capable of operating as a discrete facility. Interruption to senior school with provision of vehicle access through the site. Interruption to operation of Junior School due to replacement of playground.	4/10
vi. Alternative Use Potential	Our initial view is that the potential to secure planning consent for an alternative (higher value) use of this land is low.	10/10
	Suitability Score	29/60
2. Planning Considerations		
i. Previously Developed Land	Approximately half of the land required is previously developed (playground only – not buildings), the remainder would take-up undeveloped land.	3/10
ii. Metropolitan Open Land	The entire site is designated as MOL. Development will lead to the loss of around 0.1ha of MOL and adversely affect openness. Provision of vehicle access link through the Senior Department site will increase MOL land take.	0/20
iii. Playing Fields	The entire site meets the statutory definition of playing fields. Development will lead to the loss of around 0.2ha. Provision of vehicle access link through the Senior Department site will increase playing field land take	0/10
iv. Access Arrangements (highway safety)	Vehicle access via existing access/egress arrangements (onto Hanworth Road) but no direct vehicle access to this site. Increases in vehicle movements/trip-rates to be controlled via Travel Plan and mitigated as necessary.	1/5
v. Loss of Residential Accommodation	None.	5/5
vi. Residential (neighbour) Amenity	The closest residential neighbours lie to the north of the River and extensive boundary vegetation. Possible amenity issues can be designed-out.	4/5
vii. Urban Design (townscape/landscape)	The site is not visible from outside of the school site. Appropriate design can ensure no harm to local townscape quality.	5/5
viii. Historic Assets	Development of this site will not affect the setting of any listed buildings.	5/5
ix. Environmental	Site is adjacent to land designated as 'other site of nature importance'. Environmental impacts can be controlled via appropriate design and conditions.	3/5
	Planning Score	26/75
	Total Score	**55/135**

Site 2 – Staff Residential Accommodation (north)

Assessment Criteria	Comment	Score
1. Suitability		
i. Site Size	This is an existing defined plot, which extends to approximately 0.16ha. This is sufficient to accommodate the proposed building (assumed to comprise the demolition and replacement of the existing building). However, it is not sufficient to accommodate on-site pick up/drop off facilities, and there is no existing facility within a suitable distance. As a result this would give rise to a safeguarding conflict. Therefore the site cannot be deemed suitable in terms of its size.	0/10
ii. Available for Development (existing use/function)	Yes. The existing residential accommodation is currently occupied but can be vacated in order to make way for development. This accommodation would need to be replaced.	8/10
iii. Physical/Technical Constraints	Flat site. Adjacent to River Longford (although identified as Flood Risk Zone 3). No known physical/technical constraints.	8/10
iv. Accessibility (pick-up/drop-off)	Good pedestrian/cycle access from Uxbridge Road via existing access point (this could operate as a discrete pedestrian access point for the pre-prep facility separate from the school). Bus services operate along Hanworth and Uxbridge Roads (bus stops in close proximity to school entrance). Parking controls on Uxbridge Road preclude ability to provide car pick-up/drop-off via on-street parking. Existing vehicular access is available from Uxbridge Road. However, this location is not sufficient to accommodate on-site pick up/drop off. Car pick-up/drop-off arrangements will principally need to be provided by 're-allocation' of existing on-site parking areas via the existing access/egress point on Hanworth Road. However, this is not considered accessible from a safeguarding perspective.	4/10
v. Relationship to Existing School Facilities	A pre-prep in this location would be capable of operating as a discrete facility. Some interruption to Senior Department associated with provision of vehicle access through the site.	8/10
vi. Alternative Use Potential	Our initial view is that this site may offer planning potential for conversion/redevelopment for non-school related residential development (further investigation required in order to confirm potential and any key constraints). Redevelopment for education use would prevent this opportunity (and associated value) from being realised.	0/10
	Suitability Score	38/60
2. Planning Considerations		
i. Previously Developed Land	The development can be accommodated on previously developed land (with appropriate design).	10/10
ii. Metropolitan Open Land	The entire site is designated as MOL. Existing buildings are single storey and occupy a footprint of approximately 150sqm. New development would increase (x4) the amount and bulk of development on the site. This will have an impact on the openness of the MOL, however the potential of this impact will be limited on account of the site's location at the edge of the MOL.	10/20
iii. Playing Fields	It would not be necessary for the building to sit on land that meets the statutory definition of playing fields. However, land that does meet the statutory definition of playing fields may be required for outdoor play purposes associated with the pre-prep facility.	10/10
iv. Access Arrangements (highway safety)	Vehicle access gained from Hanworth Road via existing driveway running across Senior School site. Increases in vehicle movements/trip-rates to be controlled via Travel Plan. Existing vehicle access/aggress onto Uxbridge Road. Increased use of this subject to highway safety assessment and consideration of potential adverse effect on the setting of 127 Uxbridge Road (Grade II Listed). Potential assumed to be limited to restricted movements only.	5/5
v. Loss of Residential Accommodation	Loss of 3 residential units.	0/5
vi. Residential (neighbour) Amenity	Significant increase in pedestrian/vehicle movements in/out of Uxbridge Road access point likely to give rise to nuisance to residents of 127 Uxbridge Road (noise, vibration), nonetheless this can be controlled via appropriate design and use of conditions. Potential noise impacts on neighbours (associated with outdoor play) can be minimised through appropriate design.	3/5
vii. Urban Design	The site is not visible from outside of the school site. Appropriate design can	5/5

(townscape/landscape)	ensure no harm to local townscape quality.	
viii. Historic Assets	The site is adjacent 127 Uxbridge Road which is Grade II listed. Adverse impacts on the setting of this building (associated with works to the Uxbridge Road access point and the design of new buildings/outdoor spaces) can be controlled via appropriate design.	5/5
ix. Environmental	Site is adjacent to land designated as 'other site of nature importance'. Environmental impacts can be controlled via appropriate design and conditions.	3/5
	Planning Score	51/75
	Total Score	**89/135**

Site 3 – Rectory Lodge

Assessment Criteria	Comment	Score
1. Suitability		
i. Site Size	This is an existing defined plot, which extends to approximately 0.2ha. This is sufficient to accommodate the proposed development on the basis that the existing building is demolished.	10/10
ii. Available for Development (existing use/function)	Yes. The existing residential accommodation is currently occupied but can be vacated in order to make way for development. This accommodation would need to be replaced.	8/10
iii. Physical/Technical Constraints	Flat site. No known physical constraints.	10/10
iv. Accessibility (pick-up/drop-off)	Good pedestrian/cycle access from Uxbridge Road via existing access point (this could operate as a discrete pedestrian access point for the pre-prep facility separate from the school). Bus services operate along Hanworth and Uxbridge Roads (bus stops in close proximity to school entrance). Parking controls on Uxbridge Road preclude ability to provide car pick-up/drop-off via on-street parking. Some limited car pick-up/drop-off provision can be incorporated on-site via existing access/egress point onto Uxbridge Road. Potential to upgrade existing vehicle access/egress arrangements onto Uxbridge Road considered. Car pick-up/drop-off arrangements will principally need to be provided by 're-allocation' of existing on-site parking areas or provision of a new pick-up/drop-off facility adjacent to (or close to) the pre-prep facility, with vehicle access provided via a new link running through the Senior Department site from Hanworth Road. Potential opportunity for a pre-prep pick-up/drop-off 'loop' through existing site without compromising safeguarding.	6/10
v. Relationship to Existing School Facilities	A pre-prep in this location would be capable of operating as a discrete facility. Some interruption to Senior Department associated with provision of vehicle access through the site.	8/10
vi. Alternative Use Potential	Our initial view is that this site may offer planning potential for conversion/redevelopment for non-school related residential development (further investigation required in order to confirm potential and any key constraints). Redevelopment for education use would prevent this opportunity (and associated value) from being realised.	0/10
	Suitability Score	42/60
2. Planning Considerations		
i. Previously Developed Land	The development can be part accommodated on previously developed land.	5/10
ii. Metropolitan Open Land	The site is part designated as MOL. The site accommodates an existing 2-3 storey building and is partially screened from the MOL by mature vegetation. Appropriate design of new development on this site could ensure no adverse effect on the openness of the MOL.	10/20
iii. Playing Fields	Part of the site comprises land that meets the statutory definition of playing fields	5/10
iv. Access Arrangements (highway safety)	Vehicle access gained from Hanworth Road via existing driveway running across Senior School site. Increases in vehicle movements/trip-rates to be controlled via Travel Plan. Existing vehicle pedestrian/cycle access/aggress onto Uxbridge Road. Increased use of this subject to highway safety assessment and consideration of potential adverse effect on neighbours. Potential assumed to be limited.	5/5
v. Loss of Residential Accommodation	Potential loss of 1 residential unit.	2/5
vi. Residential (neighbour) Amenity	The site borders residential development on 3 sides. Significant increase in pedestrian/vehicle movements in/out of Uxbridge Road access point likely to give rise to nuisance to residents, nonetheless this can be controlled via appropriate design and use of conditions. Potential noise impacts on neighbours (associated with outdoor play) can be minimised through appropriate design.	3/5
vii. Urban Design (townscape/landscape)	The site is not visible from outside of the school site. Appropriate design can ensure no harm to local townscape quality.	5/5
viii. Historic Assets	Development of this site will not affect the setting of any listed buildings.	5/5

ix. Environmental	No known constraints	5/5
	Planning Score	45/75
	Total Score	**87/135**

Site 4 (Staff Residential Accommodation (South East) and car park

Assessment Criteria	Comment	Score
1. Suitability		
i. Site Size	The site is sufficient to accommodate the proposed development (assumed to comprise the demolition of the existing building).	10/10
ii. Available for Development (existing use/function)	Yes. The existing residential accommodation is currently occupied but can be vacated in order to make way for development. There is no operational need for this to be replaced.	8/10
iii. Physical/Technical Constraints	Flat site. No known physical constraints.	10/10
iv. Accessibility (pick-up/drop-off)	Good pedestrian/cycle access direct from Hanworth Road via existing access point (this could operate as a discrete pedestrian access point for the pre-prep facility separate from the school). Bus services operate along Hanworth Road bus stops in close proximity to school entrance). Car pick-up/drop-off arrangements will principally need to be provided by 're-allocation' of existing on-site parking areas or provision of a new pick-up/drop-off facility adjacent to (or close to) the pre-prep facility, with vehicle access provided via existing or a new/upgraded access/egress arrangement from Hanworth Road. Clear opportunity for a pre-prep pick-up/drop-off 'loop' through existing site without compromising safeguarding.	8/10
v. Relationship to Existing School Facilities	A pre-prep in this location would be capable of operating as a discrete facility. Some interruption to Senior Department associated with provision of vehicle access through the site (if necessary).	10/10
vi. Alternative Use Potential	Our initial view is that part of this site (Staff residential accommodation) may offer planning potential for conversion/redevelopment for non-school related residential development (further investigation required in order to confirm potential and any key constraints). Redevelopment for education use would prevent this opportunity (and associated value) from being realised. The potential to secure planning consent for an alternative (higher value) use on the remainder of the site is low.	0/10
	Suitability Score	44/60
2. Planning Considerations		
i. Previously Developed Land	The development can be accommodated on previously developed land (with appropriate design). It is noted that part of the site has been developed on a temporary basis only.	10/10
ii. Metropolitan Open Land	The entire site is designated as MOL. The existing building is single storey and occupies a footprint of approximately 100sqm. New development could have the potential to impact on the openness of the MOL, however this impact will be limited on account of the site's location at the edge of the MOL and in close proximity to the existing school buildings.	10/20
iii. Playing Fields	Once the current temporary use of part of the site expires, the land will revert back to playing fields. Redevelopment will lead to the permanent loss of land that meets the statutory definition of playing fields. Part of the site (staff accommodation) does not meet the statutory definition of playing fields.	5/10
iv. Access Arrangements (highway safety)	Vehicle access gained from Hanworth Road either via existing main (Senior) school provision or via new arrangements. Increases in vehicle movements/trip-rates to be controlled via Travel Plan.	5/5
v. Loss of Residential Accommodation	Loss of 1 residential unit.	2/5
vi. Residential (neighbour) Amenity	The site borders residential development on 2 sides. Potential noise impacts on neighbours (associated with outdoor play) can be minimised through appropriate design.	3/5
vii. Urban Design (townscape/landscape)	Redevelopment offers the opportunity to replace a poor quality existing building with a much higher quality form of development, resulting in a net improvement to existing townscape quality. Development of this site will introduce buildings into a currently undeveloped frontage which is likely to detract from local townscape character.	5/5
viii. Historic Assets	Development of this site will not affect the setting of any listed buildings.	5/5
ix. Environmental	No known constraints	5/5

Planning Score	50/75
Total Score	**94/135**

Site 5 – Caretakers Buildings

Assessment Criteria	Comment	Score
1. Suitability		
i. Site Size	Sufficient land to accommodate needs.	10/10
ii. Available for Development (existing use/function)	Yes. Loss of existing caretakers facilities (workshops and garages) will need to be demolished and replaced elsewhere on site. These could be re-provided on sites 2 or 4.	5/10
iii. Physical/Technical Constraints	Flat site. No known physical constraints.	10/10
iv. Accessibility (pick-up/drop-off)	Good pedestrian/cycle access direct from Hanworth Road via existing access point (opportunity to provide a discrete pedestrian access point for the pre-prep facility separate from the school). Bus services operate along Hanworth Road bus stops in close proximity to school entrance). Car pick-up/drop-off arrangements will principally need to be provided on the school's forecourt adjacent to (or close to) the pre-prep facility, with vehicle access provided via existing or an upgraded access/egress arrangement from Hanworth Road. Clear opportunity for a pre-prep pick-up/drop-off 'loop' through existing site. The deliveries and facilities team entrance will need to be relocated to another location on Hanworth Road. Due to increased demand, there is potential for highway/traffic issues at the existing entrance if it is to be used for deliveries, facilities, and pre-prep traffic without upgrade. Access to the new Student Gateway building and for the emergency services would require further thought to ensure access is not comprised. Access to the substation would also require further thought to ensure it is not compromised.	9/10
v. Relationship to Existing School Facilities	A pre-prep in this location could be capable of operating as a discrete facility. However, it will impact upon the setting of the new Student Gateway Building and Senior School reception and will result in interruption to existing sports facilities.	5/10
vi. Alternative Use Potential	Our initial view is that the potential to secure planning consent for an alternative (higher value) use of this land could be explored further given the existing buildings on site.	5/10
	Suitability Score	44/60
2. Planning Considerations		
i. Previously Developed Land	Part of the development can be accommodated on previously developed land.	5/10
ii. Metropolitan Open Land	The entire site is designated as MOL. The existing buildings comprise a number of 1/2- storey buildings. New development could have an impact on the openness of the MOL, however the potential of this impact will be limited on account of the site's location at the edge of the MOL.	10/20
iii. Playing Fields	Part of the site comprises land that meets the statutory definition of playing fields.	5/10
iv. Access Arrangements (highway safety)	Vehicle access gained from Hanworth Road either via existing main (Senior) school provision. Increases in vehicle movements/trip-rates to be controlled via Travel Plan.	5/5
v. Loss of Residential Accommodation	Loss of residential accommodation on site. Furthermore the required re-provision of caretakers accommodation on sites 2/4 would result in an indirect loss of residential accommodation on these sites.	0/5
vi. Residential (neighbour) Amenity	The site does not adjoin dwellings. The closest homes are opposite Hanworth Road. A pre-prep facility in this location is not expected to significantly increase existing nuisance levels associated with the school.	5/5
vii. Urban Design (townscape/landscape)	Redevelopment offers the opportunity to replace existing poor quality existing buildings with a much higher quality form of development, resulting in a net improvement to existing townscape quality.	5/5
viii. Historic Assets	Development of this site will not affect the setting of any listed buildings.	5/5
ix. Environmental	No known constraints	5/5
	Planning Score	45/75
	Total Score	**89/135**

Site 6 – Existing Car Park (west)

Assessment Criteria	Comment	Score
1. Suitability		
i. Site Size	The site is sufficient to accommodate the proposed building. However, it is not sufficient to accommodate on-site pick up/drop off facilities, and there is no existing car park facility within a suitable distance. As a result this would give rise to a safeguarding conflict. Therefore the site cannot be deemed suitable in terms of its size.	0/10
ii. Available for Development (existing use/function)	No. Loss of car parking will need to be replaced elsewhere on the site or managed as part of site wide car parking rationalisation programme. This is likely to cause significant operational difficulties for the school.	0/10
iii. Physical/Technical Constraints	Flat site. No known physical constraints.	10/10
iv. Accessibility (pick-up/drop-off)	Good pedestrian/cycle access direct from Hanworth Road via existing access point (no opportunity to provide a discrete pedestrian access point for the pre-prep facility separate from the school). Bus services operate along Hanworth Road bus stops in close proximity to school entrance). Car pick-up/drop-off arrangements will principally need to be provided by 're-allocation' of existing on-site parking areas or provision of a new pick-up/drop-off facility adjacent to (or close to) the pre-prep facility, with vehicle access provided via existing or a new/upgraded access/egress arrangement from Hanworth Road. Clear opportunity for a pre-prep pick-up/drop-off 'loop' through existing site.	8/10
v. Relationship to Existing School Facilities	The site is located in the 'heart' of the Senior Department, and would compromise the operation of the school (conflicts with access, safeguarding and circulation space for the Student Gateway due to the secure fencing that would be required for safeguarding). The new building would also compromise daylight into the Student Gateway building and there would be a loss of setting to the Student Gateway.	0/10
vi. Alternative Use Potential	Our initial view is that the potential to secure planning consent for an alternative (higher value) use of this land is low.	10/10
	Suitability Score	28/60
2. Planning Considerations		
i. Previously Developed Land	The development can be accommodated on previously developed land.	10/10
ii. Metropolitan Open Land	The site is not designated as MOL. It is located within a built up area of the site and therefore development on the site is unlikely to adversely affect the openness of the adjacent MOL. Whilst the building can be accommodated on the site, it would require other facilities to be provided on site 7 (which is in the MOL).	10/20
iii. Playing Fields	Part of the site comprises land that meets the statutory definition of playing fields. Whilst the building can be accommodated on the site, part of site 7 may be required to accommodate associated facilities.	5/10
iv. Access Arrangements (highway safety)	Vehicle access gained from Hanworth Road either via existing main (Senior) school provision or via new arrangements. Increases in vehicle movements/trip-rates to be controlled via Travel Plan.	5/5
v. Loss of Residential Accommodation	Nil	5/5
vi. Residential (neighbour) Amenity	The site is remote from residential homes	5/5
vii. Urban Design (townscape/landscape)	This is a constrained site that is largely screened from views from outside of the site. Development is unlikely to have a significant effect on local townscape character.	5/5
viii. Historic Assets	Development of this site will not affect the setting of any listed buildings.	5/5
ix. Environmental	No known constraints	5/5
	Planning Score	55/75
	Total Score	**83/135**

Site 7 – Land to North of Senior School Buildings

Assessment Criteria	Comment	Score
1. Suitability		
i. Site Size	Sufficient land to accommodate the proposed building. However, the site is not sufficient to accommodate on-site pick up/drop off facilities, and there is no existing within a suitable distance. As a result this would give rise to a safeguarding conflict. Therefore the site cannot be deemed suitable in terms of its size.	0/10
ii. Available for Development (existing use/function)	There is a conflict with the pitches. The school cannot reduce the number of pitches and all the pitches are required to serve the senior school.	5/10
iii. Physical/Technical Constraints	Flat site. No known physical constraints.	10/10
iv. Accessibility (pick-up/drop-off)	Located in centre of the site. Good pedestrian/cycle access direct from Hanworth Road and Uxbridge Road via existing access point (no opportunity to provide a discrete pedestrian access point for the pre-prep facility separate from the school). To gain access to the pre-prep facility, parents would need to walk within the school premises for more than 500m. This could cause safeguarding issues. Bus services operate along Hanworth/Uxbridge Road (bus stops in close proximity to school entrance). Car pick-up/drop-off arrangements will principally need to be provided by 're-allocation' of existing on-site parking areas or provision of a new pick-up/drop-off facility adjacent to (or close to) the pre-prep facility, with vehicle access provided via existing or a new/upgraded access/egress arrangement from Hanworth Road. Clear opportunity for a pre-prep pick-up/drop-off 'loop' to the south of the existing senior school buildings (reuse of existing infrastructure). Difficult to achieve pick-up/drop-off facilities in close proximity to this site without significant loss of playing fields and disruption to operation of the Senior Department.	4/10
v. Relationship to Existing School Facilities	Development would take up 'courtyard' style space within the Senior School. This risks compromising the operation of the senior school (conflicts with access and circulation space). The courtyard space is currently used by the senior school as a social playground area as well as for summer sports, such as athletics, rounder and lacrosse practice. Access to the sports pitches from the senior school would be greatly reduced.	0/10
vi. Alternative Use Potential	Our initial view is that the potential to secure planning consent for an alternative (higher value) use of this land is low.	10/10
	Suitability Score	29/60
2. Planning Considerations		
i. Previously Developed Land	No	0/10
ii. Metropolitan Open Land	No	20/20
iii. Playing Fields	Yes	0/10
iv. Access Arrangements (highway safety)	Vehicle access gained from Hanworth Road either via existing main (Senior) school provision. Increases in vehicle movements/trip-rates to be controlled via Travel Plan.	5/5
v. Loss of Residential Accommodation	Nil	5/5
vi. Residential (neighbour) Amenity	The site is remote from residential homes	5/5
vii. Urban Design (townscape/landscape)	This is a constrained site that is largely screened from views from outside of the site. Development is unlikely to have a significant effect on local townscape character.	5/5
viii. Historic Assets	Development of this site will not affect the setting of any listed buildings.	5/5
ix. Environmental	No known constraints	5/5
	Planning Score	50/75
	Total Score	**79/135**

Site 8 – Senior School Playground

Assessment Criteria	Comment	Score
1. Suitability		
i. Site Size	Sufficient land to accommodate the proposed building. However, the site is not sufficient to accommodate the 60sqm Habitat Area (a statutory requirement under Building Bulletin 103. Therefore the site cannot be deemed suitable in terms of its size.	0/10
ii. Available for Development (existing use/function)	Can be made available (subject to re-provision of existing sports court facilities (re-provision is essential but there are no suitable alternative location elsewhere on site)).	2/10
iii. Physical/Technical Constraints	Flat site. No known physical/technical constraints.	10/10
iv. Accessibility (pick-up/drop-off)	Good pedestrian/cycle access from Uxbridge Road via Junior School and Hanworth Road (via Senior School). Bus services operate along both roads (bus stops in close proximity to school entrance). Insufficient space to increase capacity of Junior School car pick-up/drop-off facilities to cater for pre-prep. Car pick-up/drop-off arrangements will need to be provided by provision of a new pick-up/drop-off facility adjacent to the pre-prep facility. However, the access to the west of the existing Sports Hall from Hanworth Road is not wide enough for two way traffic and cannot be widened due to existing buildings outside the boundary. Provision elsewhere on the site would conflict with safeguarding.	2/10
v. Relationship to Existing School Facilities	A pre-prep in this location would be capable of operating as a discrete facility. Loss of/re-provision of existing sports courts.	6/10
vi. Alternative Use Potential	Our initial view is that the potential to secure planning consent for an alternative (higher value) use of this land is low.	10/10
	Suitability Score	30/60
2. Planning Considerations		
i. Previously Developed Land	Yes (playground/courts – not buildings)	5/10
ii. Metropolitan Open Land	The entire site is designated as MOL. Development will lead to the loss of MOL land and adversely affect openness. Provision of vehicle access link through the Senior Department site will increase MOL land take.	0/20
iii. Playing Fields	The entire site meets the statutory definition of playing fields. Development will lead to the loss of around 0.2ha. Provision of vehicle access link through the Senior Department site will increase playing field land take	0/10
iv. Access Arrangements (highway safety)	Vehicle access via existing access/egress arrangements (onto Hanworth Road). Increases in vehicle movements/trip-rates to be controlled via Travel Plan.	5/5
v. Loss of Residential Accommodation	None.	5/5
vi. Residential (neighbour) Amenity	The closest residential neighbours lie to the north of the River and extensive boundary vegetation.	5/5
vii. Urban Design (townscape/landscape)	The site is not visible from outside of the school site. Appropriate design can ensure not harm to local townscape quality.	5/5
viii. Historic Assets	Development of this site will not affect the setting of any listed buildings.	5/5
ix. Environmental	No known constraints	5/5
	Planning Score	35/75
	Total Score	**65/135**

7. Conclusions and Next Steps

Summary of Evaluation Results

7.1 Table 7.1, below, sets out a summary of the site option evaluation score (in rank order):

Table 7.1 Summary of Options Evaluation

Rank	Site	Suitability Score	Planning Score	Total Score
1	Site 4 – Staff Residential Accommodation (South East)	44/60	50/75	94/135
2	Site 5 – Caretakers Buildings	44/60	45/75	89/135
3	Site 2 – Staff Residential Accommodation (north)	38/60	51/75	89/135
4	Site 3 – Rectory Lodge	42/60	45/75	87/135
5	Site 6 – Existing Car Park (west)	28/60	65/75	83/135
6	Site 7 – Land to North of Senior School B	34/60	50/75	79/135
7	Site 8 – Senior School Playground	40/60	35/75	65/135
8	Site 1 – Junior School Playground	29/60	26/75	55/135

Summary Analysis of Sites

7.2 The above table sets out the pro-forma scores ranked on a total score basis (suitability and planning combined.

7.3 It is important to recognise that whilst Sites 1, 2, 6, 7 and 8 do achieve suitability scores (with Site 6 achieving the highest planning score) none of these sites are deliverable. All these sites scored zero in terms of site size and are unable of accommodating the development requirement as set out in Section 3. Consideration has been given to disaggregation of facilities, specifically the pick-up/drop-off requirement, but these locations within the school site conflict with emergency access, staff and pupil access and safeguarding of existing/future pupils which render all sites unsuitable for development.

7.4 Sites 3 and 5 achieve similar suitably scores, but are lower in their planning scores. Both these sites also include additional residential accommodation which is currently in use by the school.

7.5 Site 4 clearly scores as the preferred option, being the most suitably located, but also scores high in planning terms comprising previously developed land. The site fails to score higher in planning terms due to:

- The entire location is designated as MOL, although it does include existing development;

- Part of the location constitutes the statutory definition of playing fields, although the proposed pre-prep school use will require playground/field facilities as part of the proposed development; and

- The location would potentially result in the loss of one unit of residential accommodation.

7.6 Despite the above, it is considered that these items could be addressed through detailed design measures and that this site should be explored further.

Conclusion

7.7 There is a current strategic policy conflict between protectionist MOL policy and firmly pro-development policies relating to education facilities which has the potential to preventi the further expansion of the school which is required to meet education need.

7.8 It has been clearly demonstrated that the existing MOL designation across the majority of the site prevents the strategic planning of growth to meet this need. This paper has set out the planning case in support the principle of expanding the school and has demonstrated that exceptional circumstances exist. It is important that this is recognised as part of the local plan process to allow the Council to proactively plan for the identified education need.

7.9 This paper has reviewed the potential development options for expanding the school from a planning perspective and concludes that the school is currently unable to provide a new pre-prep facility within the existing parts of the site which are excluded from the MOL. Therefore, the LEHS is seeking to take forward a plan-led approach to assist its expansion through proactive engagement with the Council at their Hanworth Road site.

7.10 On this basis we request that these representations are taken into account as part of the preparation of the emerging Local Plan, and we welcome the opportunity to discuss our representations further to discuss the principle matters in advance of the preparation of detailed plans.

Appendix I
Site Aerial View

Appendix II
Site Plan

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Hanworth Road
Uxbridge Road
Sixth Form College
Secondary School
Primary School
Promap

Appendix III
Existing Site Diagram

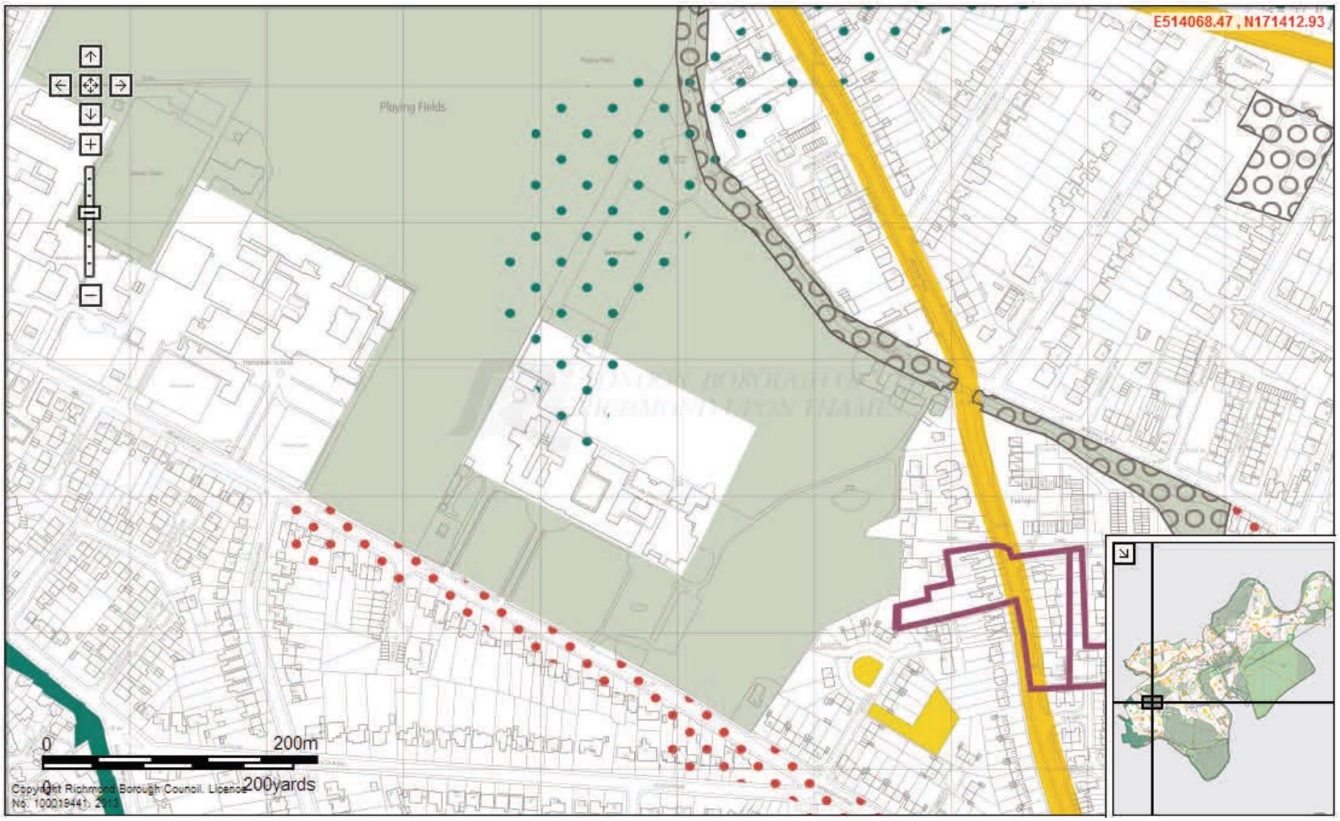
gva.co.uk


North
Hampton School
Hanworth Road
Uxbridge Road
Site boundary
Junior dept. buildings
Junior dept. playground
Senior dept. buildings
Senior dept. playground
Caretakers buildings
Staff residential accommodation
Bridge link (between junior and senior depts)
Car parking
Trees
Vehicular access
Amenity gardens
Temporary construction compound
Bus Stops
Playing fields

Appendix IV Core Strategy (2011) Proposals Map

gva.co.uk

Core Strategy (2011) Proposals Map Extract



Key

- Metropolitan Open Land
- Area poorly served with Public Open Space
- Proposed area for tree planting
- Other site of nature importance
- Conservation Area
- Other open land of townscape importance

Appendix V Site Constraints and Opportunities Plan

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North
Site Boundary
MOL boundary
Bridge link (between junior and senior depts)
Trees
Vehicular access
Listed building / Structure
Parking / Congestion stress
Sensistive residential boundary
Buildings to be retained
Areas of hardstanding
Buildings could be redeveloped
Playing fields
Uxbridge Road

Appendix VI
Site Planning History

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Application Reference	Description	Decision
85/1679	Demolition of three cycle sheds and two open store sheds and the erection of one double garage for school mini buses.	Granted 09/01/1986
87/1190	Erection of two storey block to house art studios.	Granted 19/08/1987
91/0784/FUL	Demolition of 4 no. classrooms, erection of new link block including 6 classrooms, 6 seminar rooms, library, music room and new staircase.	Granted 07/06/1991
99/0501	Provision of new sports hall and associated accommodation, construction of new sports hall complex as an extension to existing swimming pool, including sports hall, changing rooms, rowing training area and entrance.	Granted 01/07/1999
00/1215	Erection of sports hall, changing rooms and associated facilities.	Granted 16/06/2000
08/1128/FUL	Erection of temporary classroom accommodation in the form of duplex 'portacabin' single storey structure for a five year period.	Granted 28/05/2008
09/0007/FUL	Replacement of existing childrens climbing frame and playhouse.	Granted 06/02/2009
10/0227/FUL	New Arts Centre and new Theatre, new Music Department and new Art Department and general teaching rooms. Refurbishment of existing dining room and Drama Department. New secondary entrance area and public frontage. Demolition of the existing Art Department and VI Form common room building. Associated landscape works, New building to form extension to the school's existing building.	Granted 30/04/2010
10/02523/VRC	Variation of conditions relating to BREEAM, hard and soft landscaping, tree planting scheme and phasing of development.	Granted 12/10/2010
11/0945/FUL	Revision to previously approved application 10/0227/FUL to allow 2 rooflights to the art department, 2 windows to south elevation and increased height of parapet to art and music department.	Granted 17/05/2011
11/2110/PS192	Certificate of Lawful Development for temporary accommodation in connection with and for the duration of the construction of the new arts centre (approved under 10/0227/FUL).	Approved 18/08/2011
10/0227/DD01	Details pursuant to conditions (materials, location of trees, adjacent development sites, tree planting scheme, hard and soft landscaping and potentially contaminated sites.	No further actions 23/10/2012
12/2468/VRC	Variation of condition re. approved applications 10/0227/FUL and 11/0945/FUL to allow for addition of balustrade to first floor roofs to the new art and music department; amendment to sill level of 2 windows on the eastern elevation and amendments to fenestration.	Granted 03/09/2012
13/1693/VRC	Application to vary condition U20968 of application ref 08/1128/FUL to extend the temporary period of the extant consent for an additional 3 years.	Granted 16/7/16
15/3128/FUL	Extension and works to existing buildings with associated landscaping works.	Granted 24th September 2015
15/5139/FUL	Erection of temporary classroom accommodation in the form of a duplex 'portacabin' single storey structure for a temporary period	Granted 28th January 2016

	of two years.	
15/3128/NMA	Non-material amendment to planning approval 15/3128/NMA to allow for internal configuration to swimming changing rooms and access to existing pool remove existing internal stair; re-configure pupil toilets 1, 2 and 3; reconfigure design technology ancillary rooms and kitchenette area. External changes involve reconfigure doors to changing rooms and foyer to be moved/addition of ramps and step access to refurbished part of building. Addition of new steps/access to existing pool to match existing. Addition of plant related storage to west elevation. Fenestration changes to east and west facades. Addition of metal louvres to roof to screen plant. Changes to layout of hard landscape and car park area. Number of car parking spaces to remain as approved.	Granted 22nd July 2016
16/3117/FUL	Installation of gate to an existing vehicular crossover.	In progress

Appendix VII Comparable Planning Applications

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Table 1: Recent Applications for Educational Facilities within or Adjoining Metropolitan Open Land in LBRUT

Application Reference	Application Site	Development	MOL Development Considerations
12/3816/OUT	Christ's School East, Queens Road, Richmond	Development within MOL Outline application for new two storey detached building and single storey extension to provide a new sixth form and additional form entry to school. **Granted July 2013.**	Given the genuine demand for additional school spaces within the borough, the discreet siting of the proposed building to the rear of the existing school, set back from the road frontage, acceptable scale, additional landscape screening and location immediately adjacent to existing school, it was considered that the proposal would appear in context with existing school buildings therefore limiting the impact on the openness of the MOL to acceptable levels. NPPF recommends maximisation of school sites and the applicant provided evidence that alternative sites in other schools are also subject to MOL designation and could not meet the need arising. **Exception to MOL policy**
11/2906/FUL	Harrodian School, Lonsdale Road, Barnes	Development within MOL Erection of a sports hall with associated facilities. The Council considered the proposed sports hall would be inappropriate development in designated MOL and therefore contrary to local policies CP10 and DMOS2 and London Plan policy 7.17 **Refused October 2012** **Appeal dismissed September 2013.** Appeal reference: APP/L5810/A/13/2194493	Application was recommended for refusal. The Council considered that inappropriate development should not be permitted unless there are very special circumstances that outweigh the harm to the MOL. The applicant stated that very special circumstances to outweigh the harm are the need for the facility, the ability of third parties to use the facilities and proposed boundary improvements. The Council argued that although a need for the facility was recognised, no justification had been made to justify the overall scale of the development (including changing rooms, seating capacity, storage space, office etc) and location. The Council stated in their committee report that 'it is open to the applicant to apply for a parcel of land to be deleted from MOL designation in the development plan…[this] option has not been exercised'. The appeal was dismissed due to the harm that arises from inappropriate development in the MOL, the reduction in openness that the building would cause (an important quality of MOL). The Inspector found that the harm associated with inappropriate development in the MOL was not outweighed by other considerations so as to amount to the very special circumstance

			necessary to justify the developmentJust . **Inappropriate use and no very special circumstances to justify departure from MOL policy**
10/2312/FUL	Grey Court School, Ham Street, Ham	Development adjacent to MOL Erection of single storey east side extension to existing school library, single storey west side extension to existing design and technology class rooms and single storey rear extension. **Granted December 2010**	Whilst open areas surrounding Grey Court School are designated MOL, the extensions were located outside MOL and as such there was no net loss of designated MOL as a result of this permission. **Compliant with MOL policy**
10/2200/FUL	Christ's School, Queens Road, Richmond	Development adjacent to MOL Three storey extension to the west façade of the existing main school building. **Granted October 2010**	Land surrounding the building complex is designated as MOL, however the extension is not proposed on MOL land. The extension would not materially impact on the MOL as it will be seen against the back drop of a higher building, and is within the built area of the school complex. **Compliant with MOL policy**
10/2226/FUL	Orleans Park School, Richmond Road, Twickenham	Development adjacent to MOL Creation of a new two storey extension to the north façade of the existing school building incorporating four new classrooms, office, plant room and staircase **Granted December 2010**	Proposed extension is set away from the MOL boundary by some 6 metres and therefore does not adversely impact upon the openness of this part of the site. **Compliant with MOL policy**
09/0680/FUL	Orleans Park School, Richmond Road, Twickenham	Development part within MOL Construction of an extension to male sports changing facilities and internal and external sports equipment stores. **Granted May 2005**	The extension only projects 5 metres into designated MOL. Given the modest scale and design of the extensions, and their location next to existing tennis courts and buildings, the proposal would not unduly compromise the openness of the MOL, and therefore this exceptional circumstance would not result in inappropriate development in MOL. **Exception to MOL policy.**

Table 2: Other Applications for Development on Metropolitan Open Land in LBRUT

Application Reference	Application Site	Development	Justification of MOL Development
10/0101/FUL	Pavilion, Palewell Common Drive, East	Development within MOL Refurbishment/modernisation of pavilion building and single storey extension to	Development on MOL considered acceptable because not of a scale to compromise the use of the open land, and was considered to support the outdoor use. Therefore this met the exception to the MOL

	Sheen	provide new café. **Granted March 2010**	policy. **Exception to MOL policy**
10/3016/FUL	Palewell Cottage, Palewell Common Drive, East Sheen	Development within MOL Change of use from single dwelling house to non-residential nursery and construction of single storey extension (c.50 sqm) to provide a classroom and WCs. **Granted January 2011**	Loss of residential use justified because provision of day nurseries is encouraged and would meet wider community need. In light of existing residential use, proposed nursery use in MOL considered acceptable and small scale extension would not compromise aims and objectives of MOL. **Exception to MOL policy**
07/1081/EXT	Lynde House, 28 Cambridge Park, Twicken-ham	Development within MOL Extension of time limit for 07/1081/FUL (erection of three single storey extensions to existing care home) **Granted August 2010**	Application on MOL land and would result in an increase of the existing building footprint by 17%, therefore contrary to MOL policies. However, considering the extant permission on site, the large size of the site and proximity of development to existing buildings, it was concluded that the openness of the MOL would not be materially eroded and an exception could be made in this case. **Exception to MOL policy**
08/0485/FUL	Lignarius House, Hampton Court Road, East Molesey	Development part within MOL Demolition of car showroom and associated offices in connection with redevelopment of site to provide 7 residential units and car parking (amendment to previously approved application 06/3618/FUL) **Granted May 2008**	The principle of the development was already established, but proposed development encroaches 8 metres on to MOL land. However, given the scale, bulk and mass of the proposals, and the removal of existing unsympathetic outbuildings and hard standing, it was considered that the scheme would not impact upon the openness and character of the MOL. **Exception to MOL policy**
08/4540/FUL	Royal Richmond Archery Club, Old Deer Park, Kew Road, Kew	Development within MOL Demolition of existing pre-fabricated single storey club house and construction of new timber framed single storey club house (90 sqm), archery store and indoor archery range. **Granted February 2009**	Proposed replacement building is of modest scale and related to the functional use of the MOL. In context of the large site/MOL and siting of the new building in close proximity to the road, the proposal would not have any adverse effect on the character and openness of the MOL. **Exception to MOL policy**

Appendix VIII

Scott Brownrigg Architects Feasibility Plans

Note:
This drawing is based on survey information produced by Sterling Surveys and information provided by LEHS received on 26/11/2014
AutoCAD drawing filenames:
SITE-SURVEY.DWG (Produced Sept 2005) and 0607-M-Plans 2013-14-Ground.DWG (Produced 2013)
This drawing is included in the Cognica Ltd Operations and Maintenance Manual published on 31/01/2014. (Recieved on 26/11/2014).

Key:

Extent of land owned by LEHS shown bounded in red

1 Pre-Prep potential locations	17/08/16	MOR/ICP

77 Endell Street
London WC2H 9DZ

T +44 (0)20 7240 7766
F +44 (0)20 7240 2454
W scottbrownrigg.com

SCOTT BROWNRIGG

Client
The Lady Eleanor Holles School

Job Title
Pre-Prep Facility

Drawing Title
Existing Site Plan showing potential sites considered for Pre-Prep Facility

Scale
1 : 2000 @ A3

Project Number	Drawing Number	Rev
16360	**SK(10) 100**	**1**

Status
FOR INFORMATION

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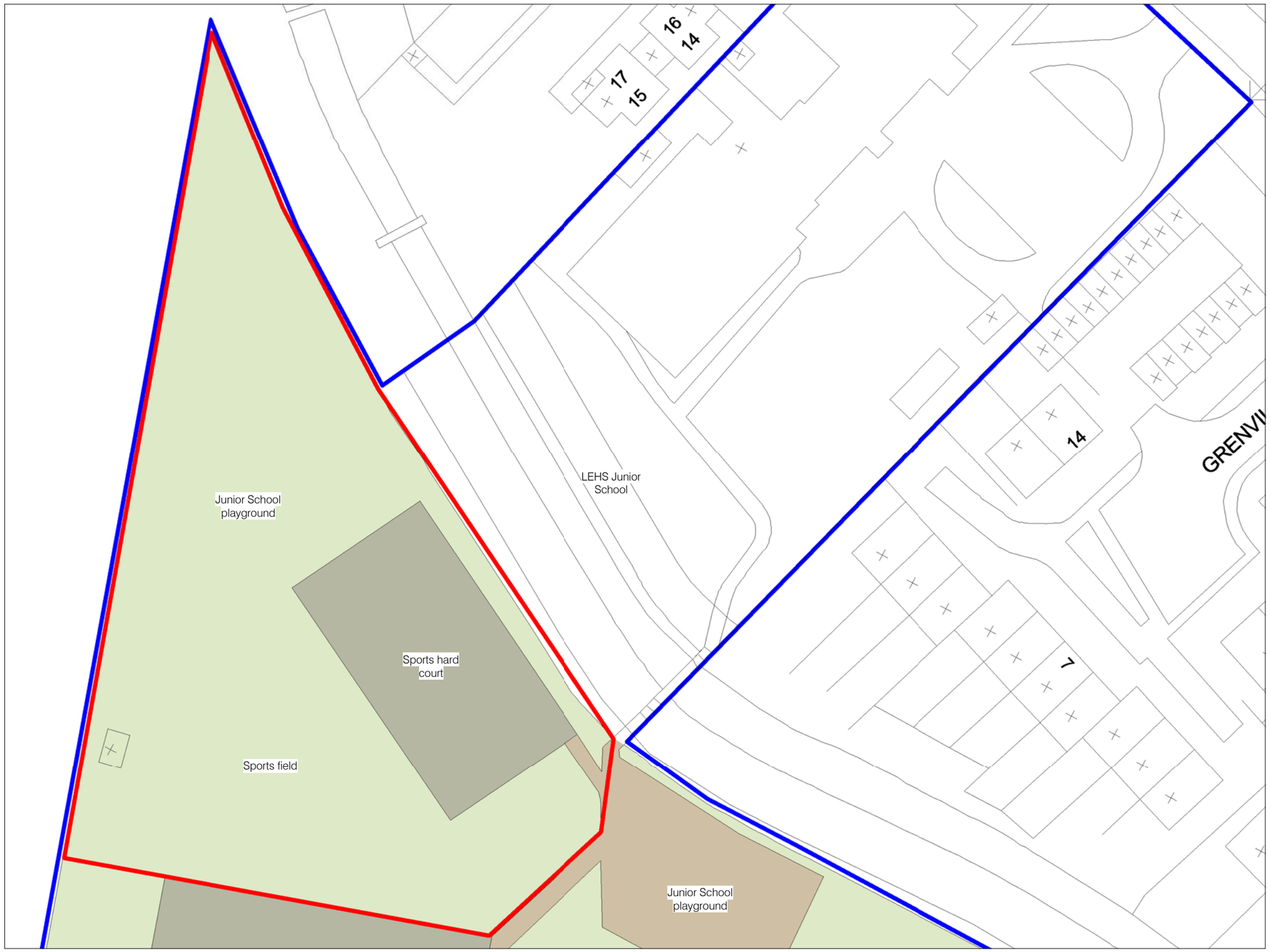

Key:

Potential site considered for Pre-prep facility site

Extent of land owned by LEHS

1 Pre-Prep potential locations	17/08/16	MOR/ICP

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Client
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Job Title
Pre-Prep Facility

Drawing Title
Pre-Prep Potential Location 1 - As Existing

Scale
As indicated @ A3

Project Number	Drawing Number	Rev
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Status
FOR INFORMATION

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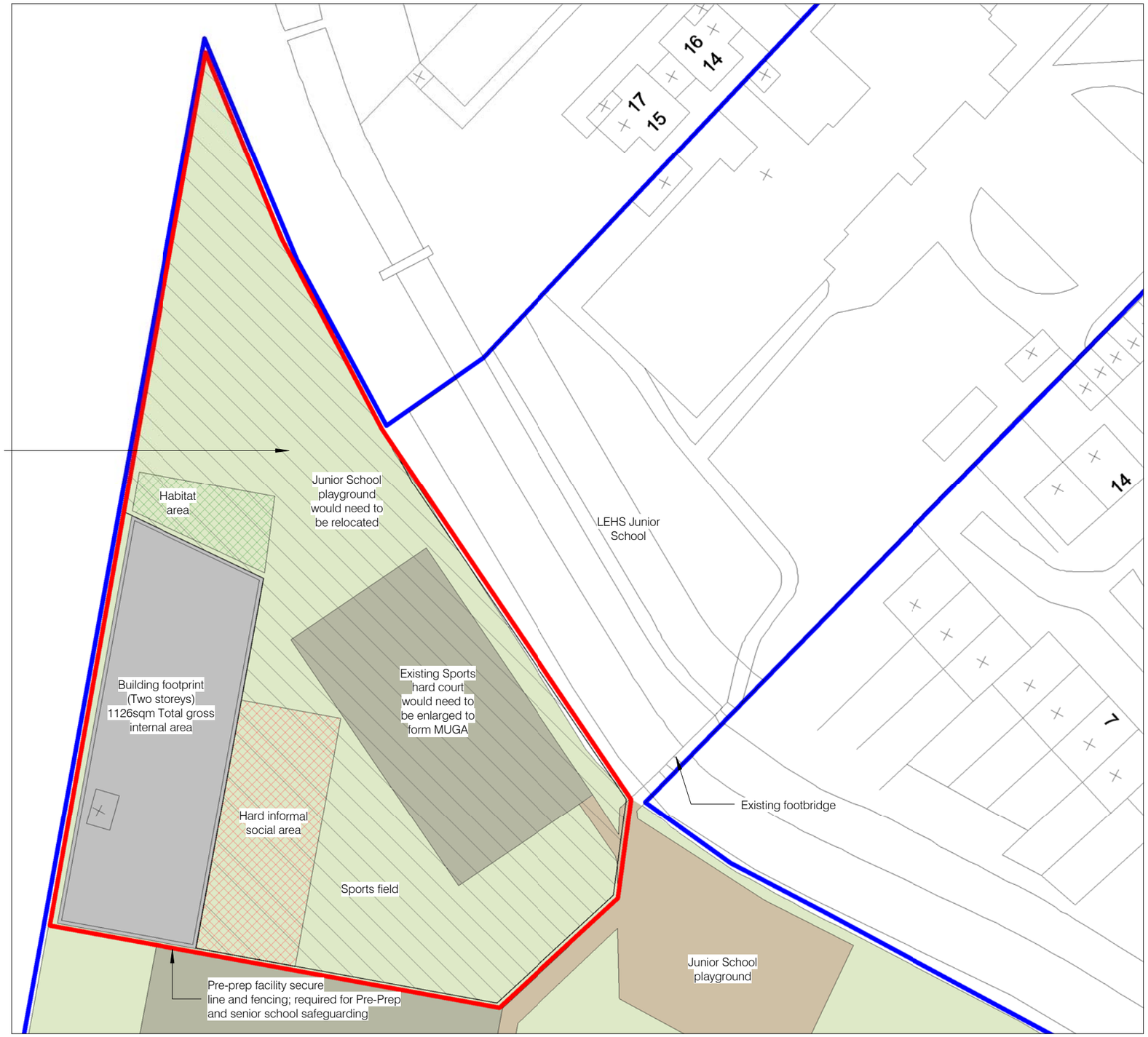

Key:

Potential site considered for Pre-prep facility site

Extent of land owned by LEHS

Net Site Area (a.k.a 'playing field area'

Potential Location 1

Pre-prep site area: 3623sqm
Building footprint: 770sqm
Gross floor area: 1126sqm
Net site area: 2853sqm
MUGA: 0sqm
Pick-up / Drop-off: 0sqm
Site within MOL

1 Pre-Prep potential locations	17/08/16	MOR/ICP

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London WC2H 9DZ

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Client
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Job Title
Pre-Prep Facility

Drawing Title
Pre-Prep Potential Location 1

Scale
As indicated @ A3

Project Number	Drawing Number	Rev
16360	SK(10) 102	1

Status
FOR INFORMATION

metres | 10 | 20 | 30 | 40 | 50

Key:

- Potential site considered for Pre-prep facility site
- Extent of land owned by LEHS

1 Pre-Prep potential locations 17/08/16 MOR/ICP

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Client
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Job Title
Pre-Prep Facility

Drawing Title
Pre-Prep Potential Location 2 - As Existing

Scale
As indicated @ A3

Project Number	Drawing Number	Rev
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Status
FOR INFORMATION

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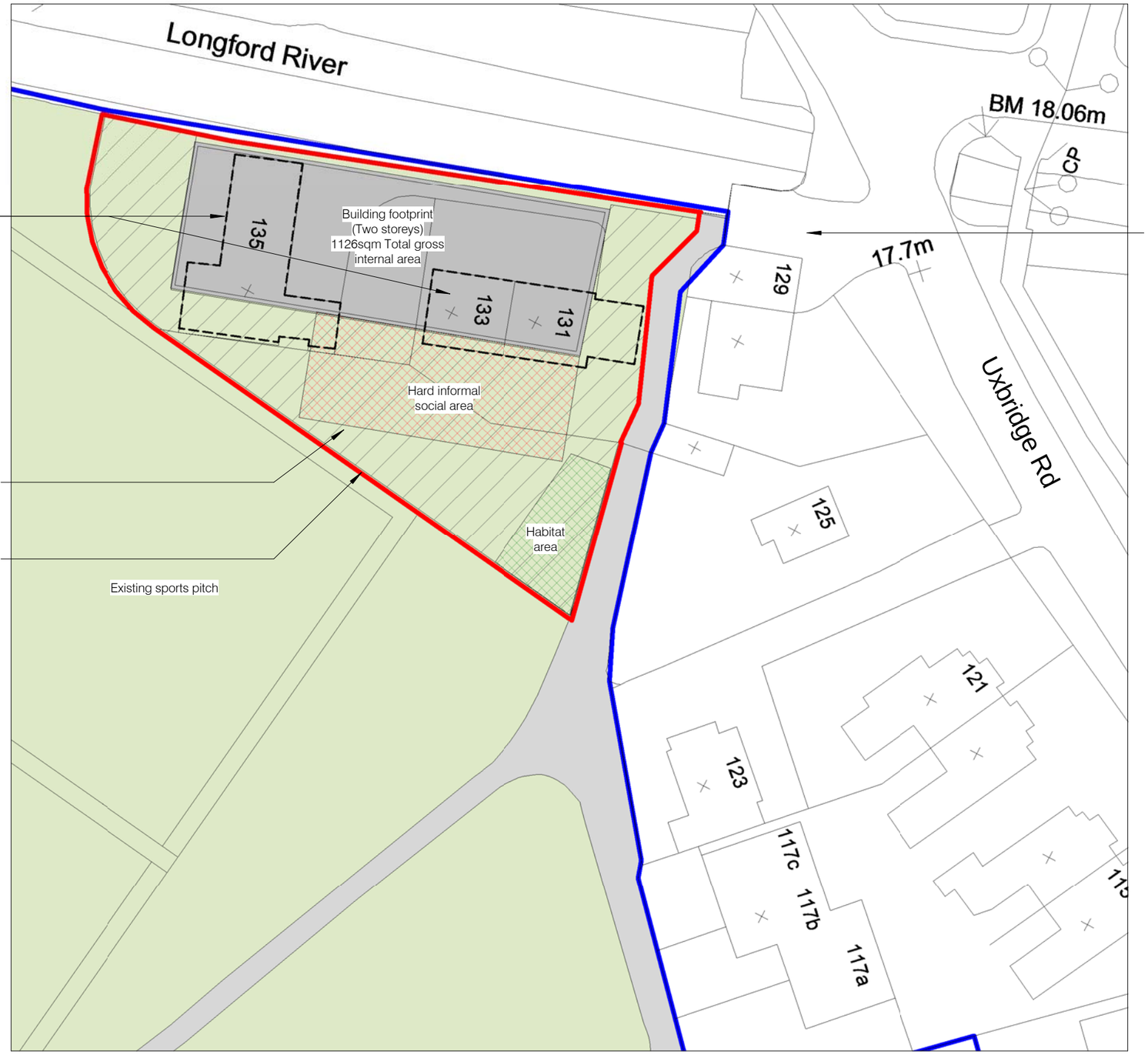

Residences to be demolished and relocated elsewhere in the LEHS campus

Net site area (a.k.a 'playing field area' would be insufficient')

Pre-Prep facility secure line and fencing; required for Pre-Prep and Senior School safeguarding

Access route problematic for Pre-Prep drop-off and access to Senior School

Key:

- Potential site considered for Pre-prep facility site
- Extent of land owned by LEHS
- Net Site Area (a.k.a 'playing field area'

Potential Location 2

Pre-prep site area: 1867sqm
Building footprint: 770sqm
Gross floor area: 1126sqm
Net site area: 1206sqm
MUGA: 0sqm
Pick-up / Drop-off: 0sqm
Site outside MOL

1 Pre-Prep potential locations 17/08/16 MOR/ICP

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Client
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Job Title
Pre-Prep Facility

Drawing Title
Pre-Prep Potential Location 2

Scale
As indicated @ A3

Project Number	Drawing Number	Rev
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Status
FOR INFORMATION

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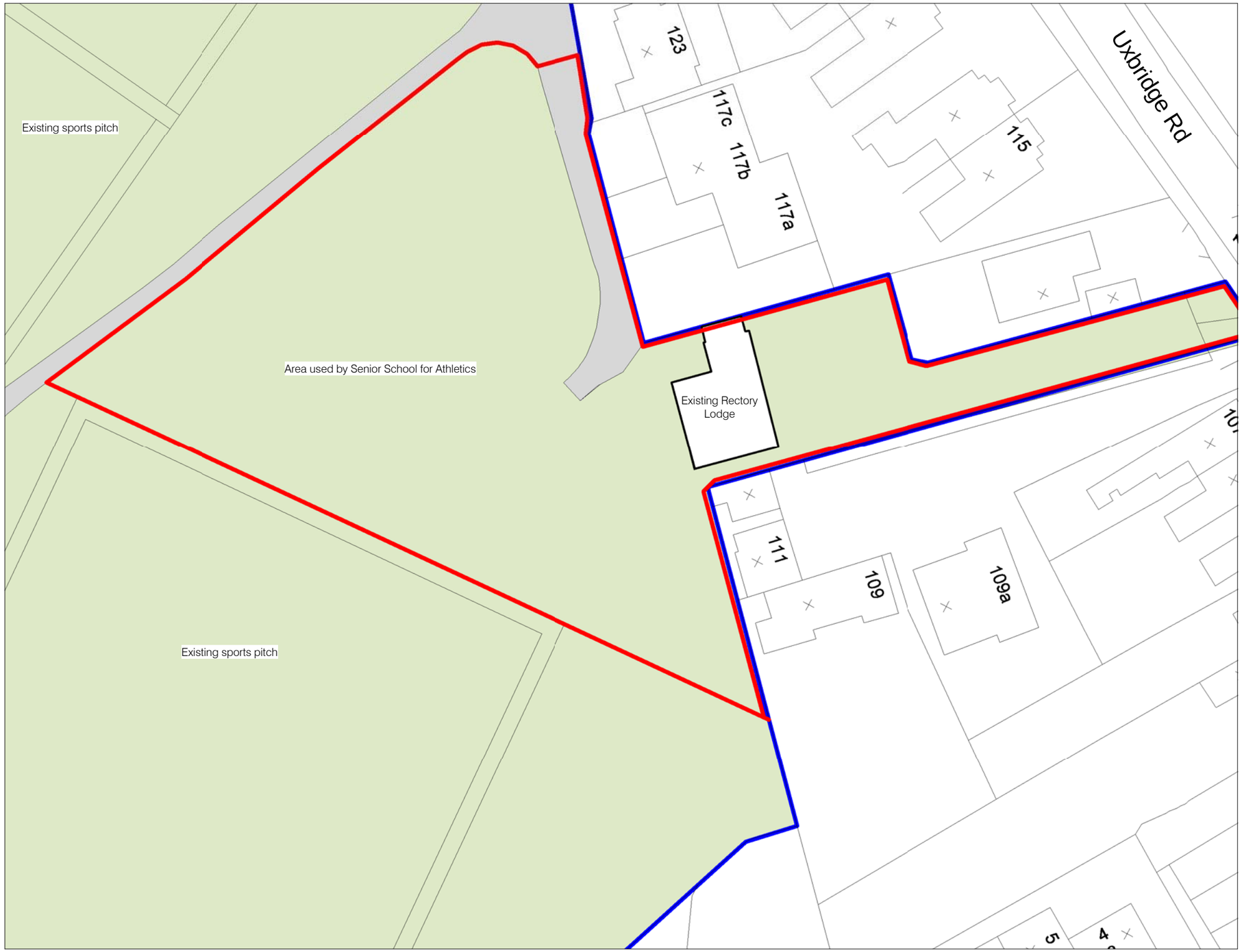

Key:

Potential site considered for Pre-prep facility site

Extent of land owned by LEHS

1 Pre-Prep potential locations 17/08/16 MOR/ICP

77 Endell Street
London WC2H 9DZ

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SCOTT BROWNRIGG

Client
The Lady Eleanor Holles School

Job Title
Pre-Prep Facility

Drawing Title
Pre-Prep Potential Location 3 - As Existing

Scale
As indicated @ A3

Project Number	Drawing Number	Rev
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Status
FOR INFORMATION

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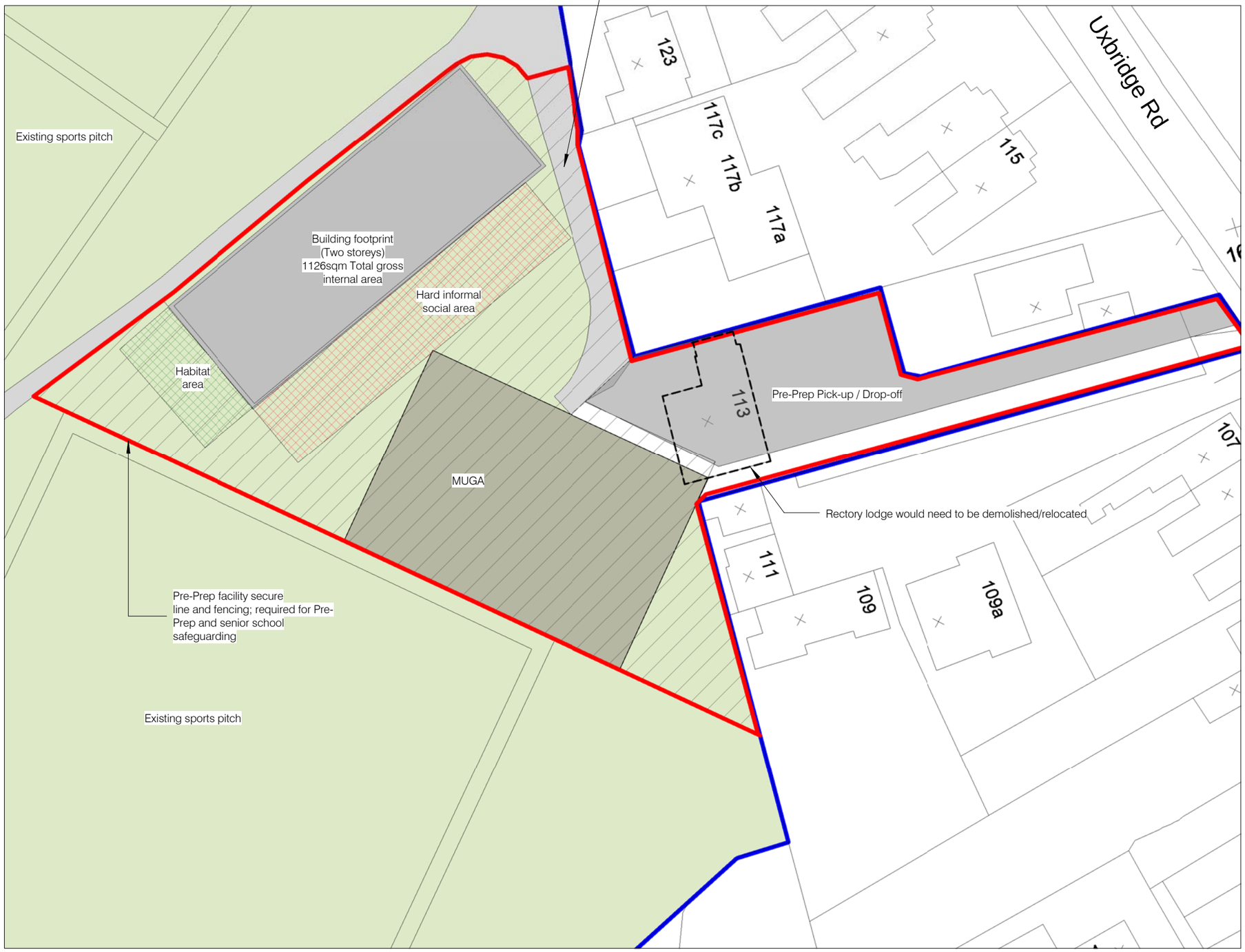

Key:

- Potential site considered for Pre-prep facility site
- Extent of land owned by LEHS
- Net Site Area (a.k.a 'playing field area'

Potential Location 3

Pre-prep site area: 3986sqm
Building footprint: 770sqm
Gross floor area: 1126sqm
Net Site Area: 1886sqm
MUGA: 730sqm
Pick-up / Drop-off: 600sqm
Site within MOL

1 Pre-Prep potential locations	17/08/16	MOR/ICP

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Client
The Lady Eleanor Holles School

Job Title
Pre-Prep Facility

Drawing Title
Pre-Prep Potential Location 3

Scale
As indicated @ A3

Project Number	Drawing Number	Rev
16360	SK(10) 106	1

Status
FOR INFORMATION

metres 10 20 30 40 50

Key:

Potential site considered for Pre-prep facility site

Extent of land owned by LEHS

1	Pre-Prep potential locations	17/08/16	MOR/ICP

77 Endell Street
London WC2H 9DZ

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SCOTT BROWNRIGG

Client
The Lady Eleanor Holles School

Job Title
Pre-Prep Facility

Drawing Title
Pre-prep Potential Location 4 - As Existing

Scale
As indicated @ A3

Project Number	Drawing Number	Rev
16360	**SK(10) 107**	**1**

Status
FOR INFORMATION

metres 10 20 30 40 50

Key:

- Potential site considered for Pre-prep facility site
- Extent of land owned by LEHS
- Net Site Area (a.k.a 'playing field area'

Potential Location 4

Pre-prep site area: 6000sqm
Building footprint: 770sqm
Gross floor area: 1126sqm
Net Site area: 1300sqm
MUGA: 730sqm
Pick-up / Drop-off: 3000sqm
Site within MOL

1 Pre-Prep potential locations	17/08/16	MOR/ICP

77 Endell Street
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F +44 (0)20 7240 2454
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Client
The Lady Eleanor Holles School

Job Title
Pre-Prep Facility

Drawing Title
Pre-prep Potential Location 4

Scale
As indicated @ A3

Project Number	Drawing Number	Rev
16360	SK(10) 108	1

Status
FOR INFORMATION

metres 10 20 30 40 50

Key:

Potential site considered for Pre-prep facility site

Extent of land owned by LEHS

1 Pre-Prep potential locations	17/08/16	MOR/ICP

77 Endell Street
London WC2H 9DZ

T +44 (0)20 7240 7766
F +44 (0)20 7240 2454
W scottbrownrigg.com

SCOTT BROWNRIGG

Client
The Lady Eleanor Holles School

Job Title
Pre-Prep Facility

Drawing Title
Pre-Prep Potential Location 5 - As Existing

Scale
As indicated @ A3

Project Number	Drawing Number	Rev
16360	SK(10) 109	1

Status
FOR INFORMATION

metres 10 20 30 40 50

Access to Student Gateway compromised by Pre-Prep facility.

Existing substation must be retained in existing location

Impact on existing tree; may need to be removed

Existing facilities team workshops would need to be demolished

Existing garage would need to be demolished/relocated

Impact on existing tree; may need to be removed

Caretaker residence. two storey brick dwelling would need to be demolished and relocated elsewhere in the LEHS campus

Deliveries and facilities team entrance would need to be relocated

Senior School entrance and existing VIP parking area compromised by Pre-Prep facility parking

Pre-Prep facility secure line and fencing; required for Pre-Prep and Senior School safeguarding

Existing Senior School social area and tennis courts would be lost

Key:

Potential site considered for Pre-prep facility site

Extent of land owned by LEHS

Net Site Area (a.k.a 'playing field area'

Potential Location 5

Pre-prep Site area: 6000sqm
Building footprint: 770sqm
Gross internal floor area: 1126sqm
Net Site area: 2237sqm
MUGA: 730sqm
Pick-up / Drop-off: 3000sqm
Site area within MOL

1 Pre-Prep potential locations 17/08/16 MOR/ICP

77 Endell Street
London WC2H 9DZ

T +44 (0)20 7240 7766
F +44 (0)20 7240 2454
W scottbrownrigg.com

SCOTT BROWNRIGG

Client
The Lady Eleanor Holles School

Job Title
Pre-Prep Facility

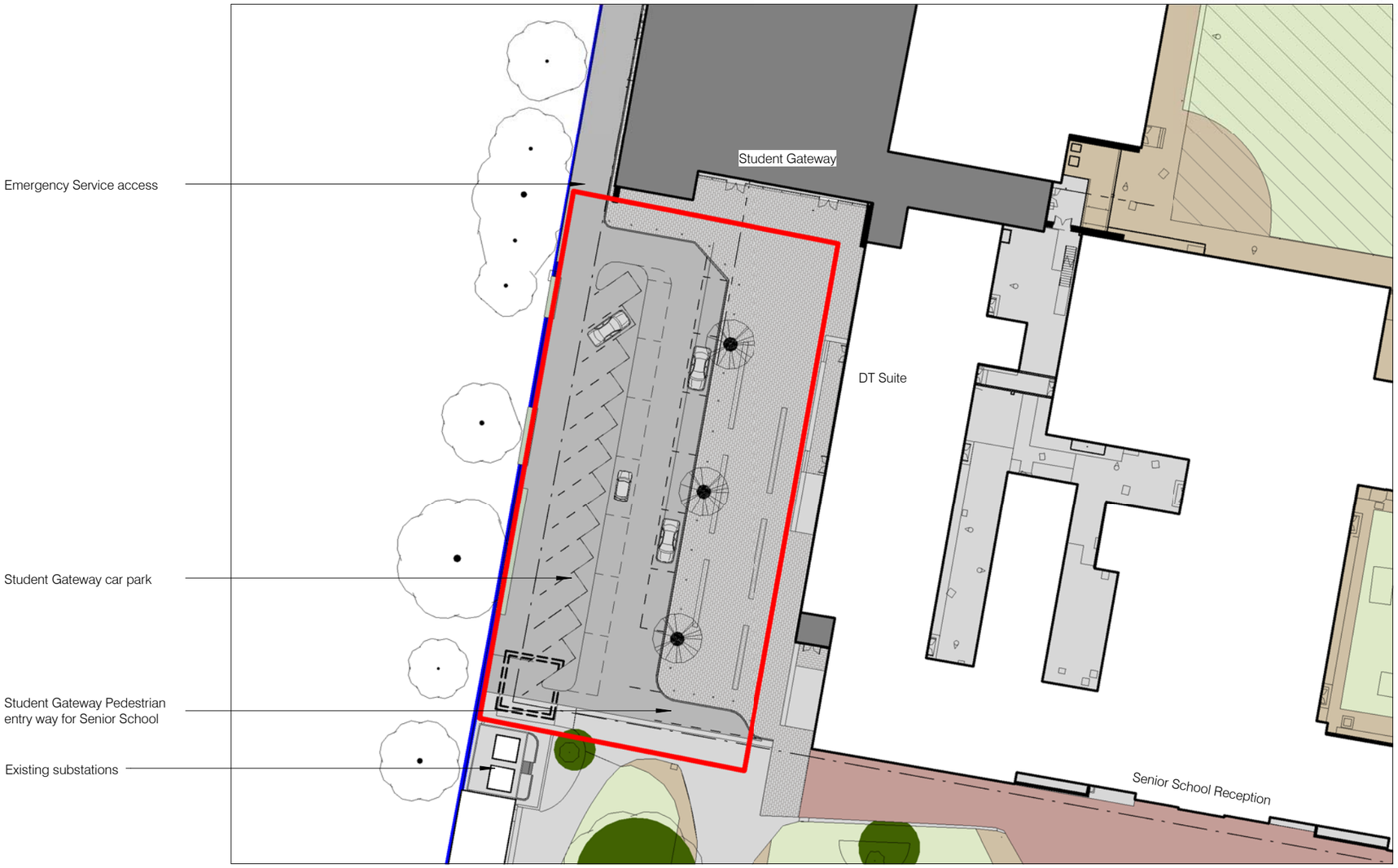
Drawing Title
Pre-Prep Potential Location 5

Scale
As indicated @ A3

Project Number 16360 | Drawing Number SK(10) 110 | Rev 1

Status
FOR INFORMATION

metres 10 20 30 40 50



Key:

Potential site considered for Pre-prep facility site

Extent of land owned by LEHS

1	Pre-Prep potential locations	17/08/16	MOR/ICP

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Client
The Lady Eleanor Holles School

Job Title
Pre-Prep Facility

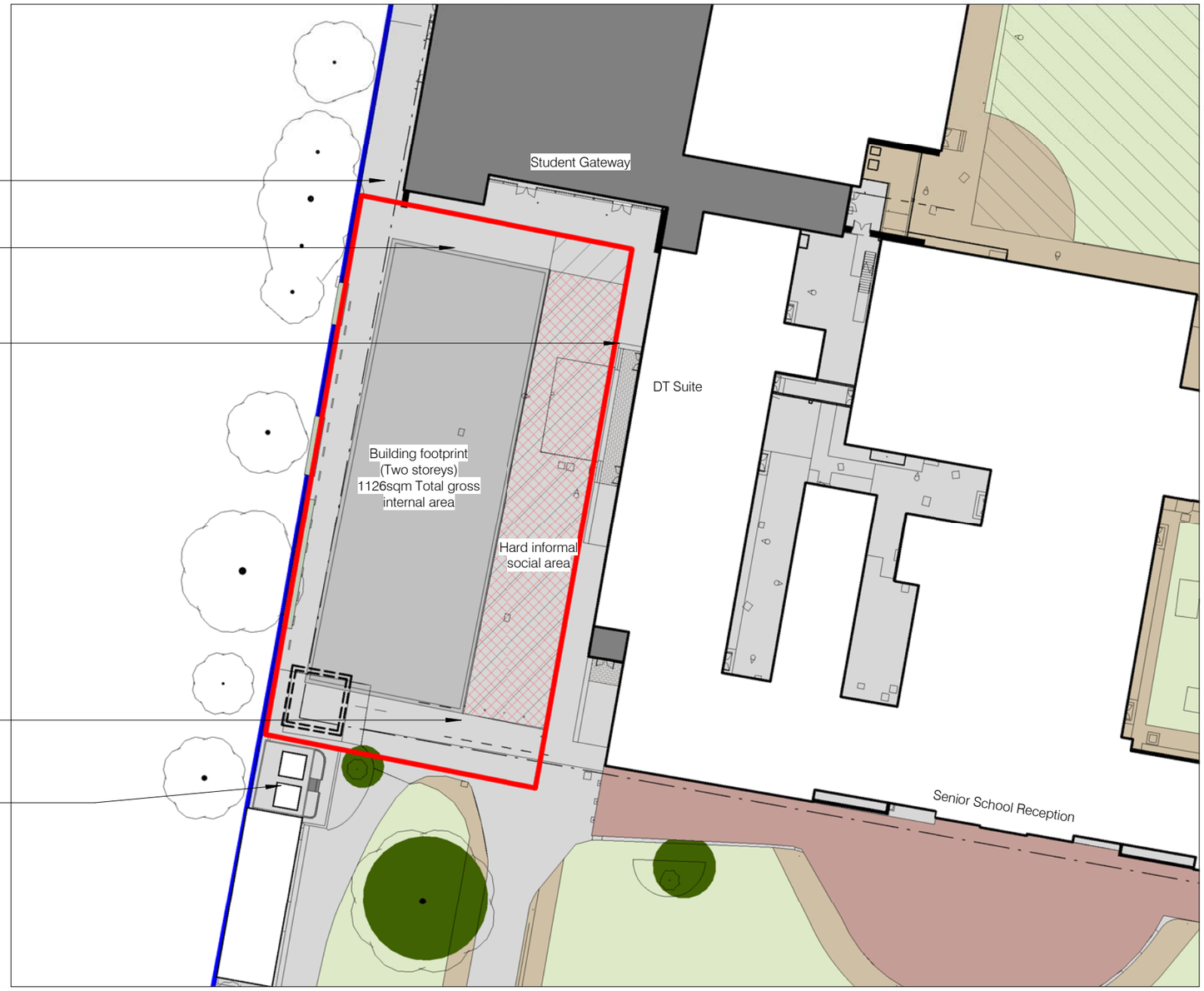
Drawing Title
Pre-Prep Potential Location 6 - As Existing

Scale
As indicated @ A3

Project Number	Drawing Number	Rev
16360	**SK(10) 111**	**1**

Status
FOR INFORMATION

metres 10 20 30 40 50



Emergency Service access must be maintained

Statutory requirement for daylight in existing and proposed buildings compromised

Pre-Prep facility secure line and fencing; required for Pre-Prep and Senior School safeguarding compromised

Student Gateway pedestrian entry way for Senior School compromised

Existing substations which must be retained in existing location constrains area

Key:

- Potential site considered for Pre-prep facility site
- Extent of land owned by LEHS
- Net Site Area (a.k.a 'playing field area'

Potential Location 6

Pre-prep site area: 1487sqm
Building footprint: 770sqm
Gross floor area: 1126sqm
Net Site Area: 380sqm
MUGA: 0sqm
Pick-up / Drop-off: 0sqm
Site outside MOL

1 Pre-Prep potential locations	17/08/16	MOR/ICP

77 Endell Street
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Client
The Lady Eleanor Holles School

Job Title
Pre-Prep Facility

Drawing Title
Pre-Prep Potential Location 6

Scale
As indicated @ A3

Project Number	Drawing Number	Rev
16360	SK(10) 112	1

Status
FOR INFORMATION

metres 10 20 30 40 50

Key:

Potential site considered for Pre-prep facility site

Extent of land owned by LEHS

1 Pre-Prep potential locations 17/08/16 MOR/ICP

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Client
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Job Title
Pre-Prep Facility

Drawing Title
Pre-Prep Potential Location 7 - As Existing

Scale
As indicated @ A3

Project Number	Drawing Number	Rev
16360	SK(10) 113	1

Status
FOR INFORMATION

metres 10 20 30 40 50

Car parking could not be accomodated in this location, therefore, Pre-Prep parents would have to walk for more than 500m to drop-off/collect their children. This would significantly compromise safeguarding with Senior School pupils

Loss of visual amenity (loss of views of sport pitches from Senior School)

Access to Senior School, outdoor social areas and sports pitches would be compromised

Key:

- Potential site considered for Pre-prep facility site
- Extent of land owned by LEHS
- Net Site Area (a.k.a 'playing field area'

Potential Location 7

Pre-prep site area: 3000sqm
Building footprint: 770sqm
Gross floor area: 1126sqm
Net Site Area: 1500sqm
MUGA: 730sqm
Pick-up / Drop-off: 0sqm
Site outside MOL

1 Pre-Prep potential locations	17/08/16	MOR/ICP

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Client
The Lady Eleanor Holles School

Job Title
Pre-Prep Facility

Drawing Title
Pre-prep Potential Location 7

Scale
As indicated @ A3

Project Number	Drawing Number	Rev
16360	SK(10) 114	1

Status
FOR INFORMATION

metres 10 20 30 40 50

Key:

Potential site considered for Pre-prep facility site

Extent of land owned by LEHS

1 Pre-Prep potential locations	17/08/16	MOR/ICP

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Client
The Lady Eleanor Holles School

Job Title
Pre-Prep Facility

Drawing Title
Pre-Prep Potential Location 8 - As Existing

Scale
As indicated @ A3

Project Number	Drawing Number	Rev
16360	SK(10) 115	1

Status
FOR INFORMATION

metres 10 20 30 40 50

Key:

- Potential site considered for Pre-prep facility site
- Extent of land owned by LEHS
- Net Site Area (a.k.a 'playing field area'

Potential Location 8

Pre-prep site area: 6000sqm
Building footprint: 770sqm
Gross floor area: 1126sqm
Net Site Area: 1500sqm
MUGA: 730sqm
Pick-up / Drop-off: 3000sqm
Site within MOL

1 Pre-Prep potential locations 17/08/16 MOR/ICP

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SCOTT BROWNRIGG

Client
The Lady Eleanor Holles School

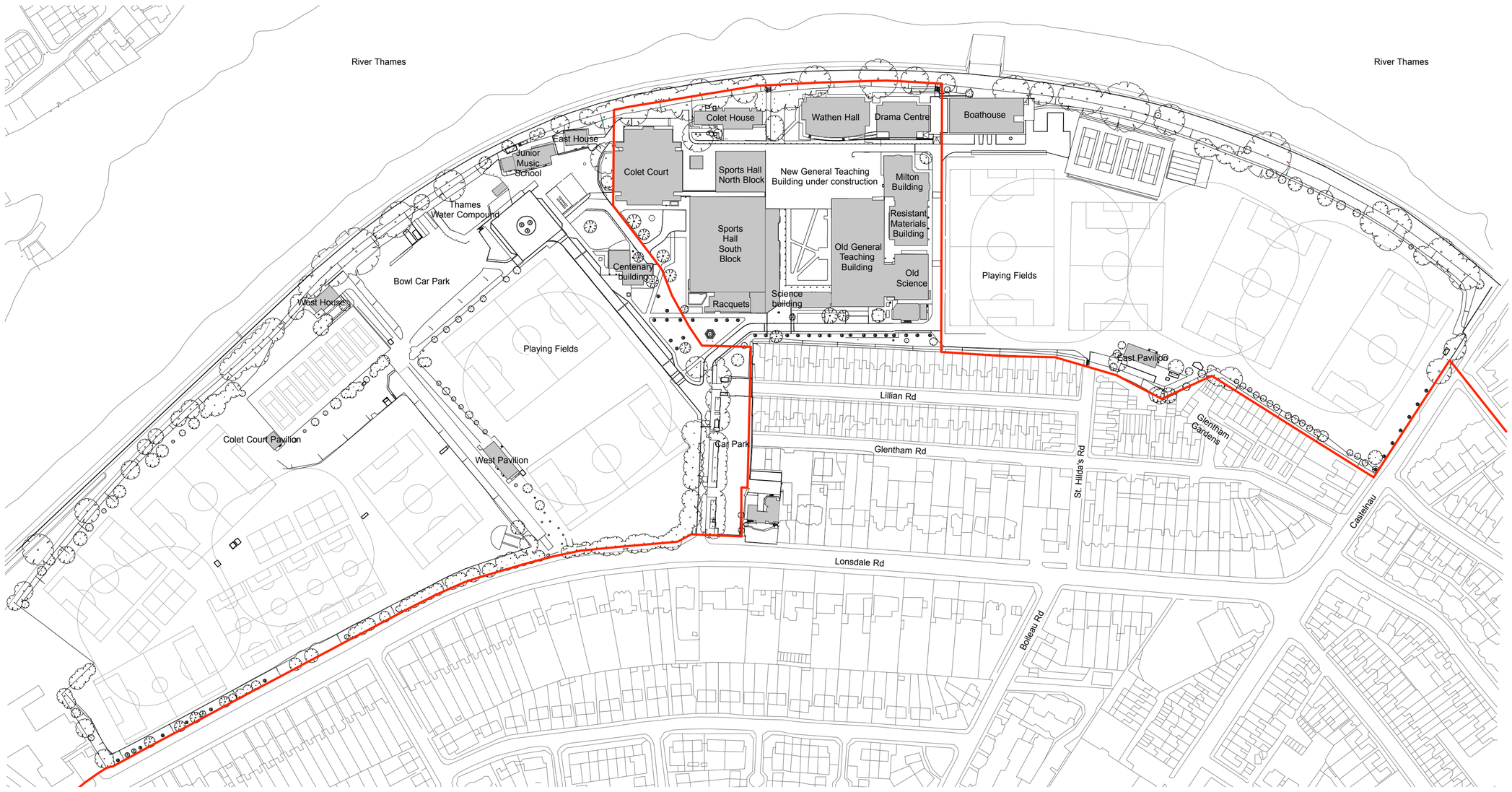
Job Title
Pre-Prep Facility

Drawing Title
Pre-Prep Potential Location 8

Scale
As indicated @ A3

Project Number	Drawing Number	Rev
16360	SK(10) 116	1

Status
FOR INFORMATION



Site Plan, 1.2000

Aerial Image, NTS

KEY

Existing Metropolitan Open Land (MOL) boundary

for information

Notes	Rev	Date	Amendment

N

WALTERS & COHEN ARCHITECTS
2 Wilkin Street
London NW5 3NL
Telephone 020 7428 9751
mail@waltersandcohen.com

St Paul's School, Masterplan

1604-PR-1002
Existing MOL boundary

Checked by	Scale	Date Drawn	Job No.	**Drawing No.**	Revision
MAC	1:2000@A1	04.07.2016	1604	**1604-PR-1002**	00

This drawing is submitted for illustrative purposes only and does not form part of the planning application

Key

Proposed Building Hierarchy

- 4650 sqm — Open land created adjoining tow path
- 2375 sqm — Proposed maximum inappropriate development within MOL
- 1516 sqm — Existing buildings adjoining tow path removed
- Building Retained

- Metropolitan Open Land Boundary
- Conservation Area Boundary
- Environment Agency 16m Ecology Zone

PL1	15.04.08	pt	planning boundary and building footprint amended		pt
PL	15.05.07	LB	Planning submission		pt

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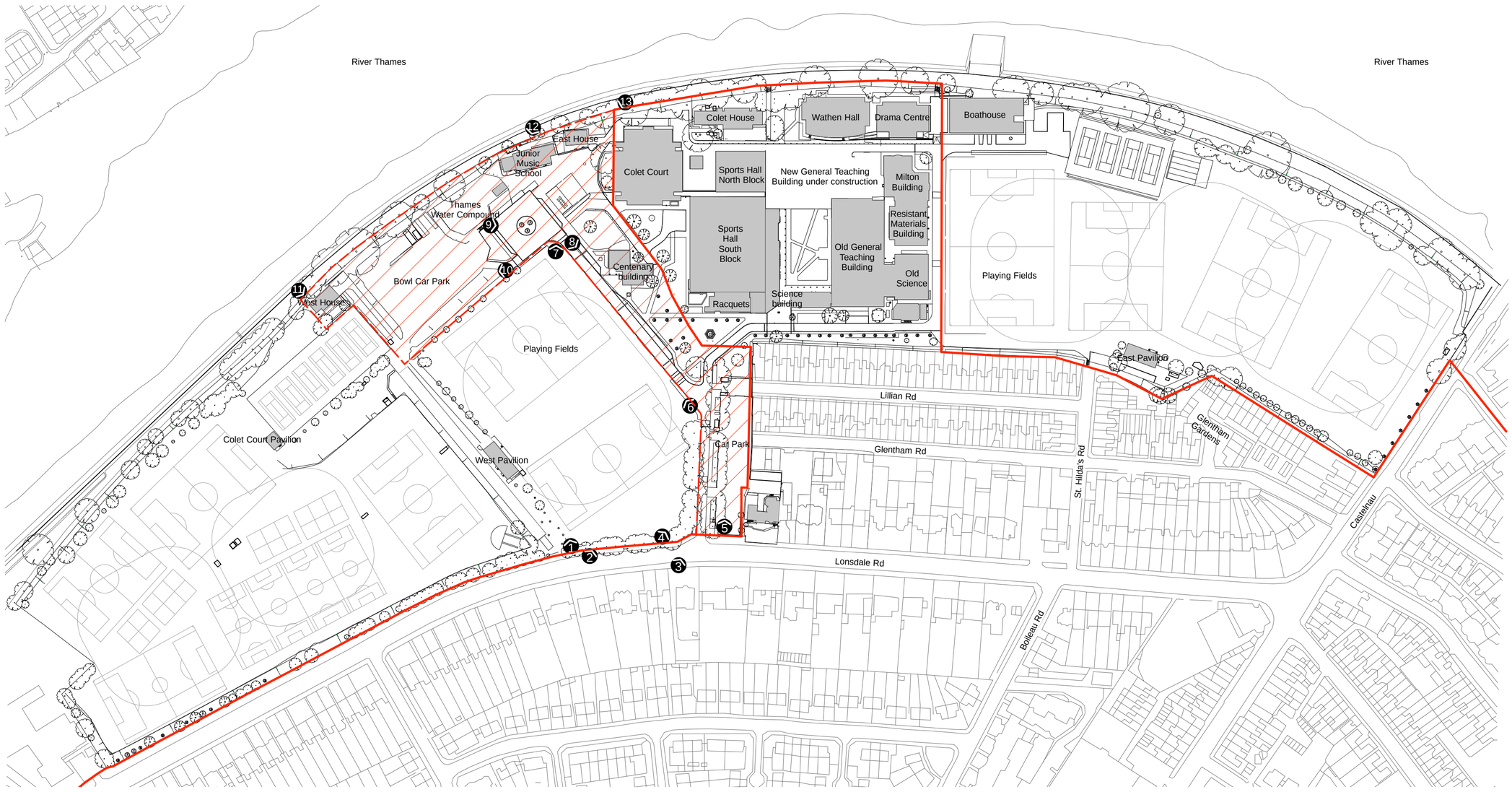
pta@pateltaylor.co.uk
Architecture Landscape Urban Design

Client	ST PAUL'S SCHOOL
Project	ST PAUL'S SCHOOL
Title	MOL Gain Drawing

Job No.	317	Drwg No	20.070	Rev	PL1
Scale	1:1250 @ A1 1:2500 @ A3	Date	22.03.05	Sheet	A1
Drawn	yyl	Checked			pt



Site Plan, 1.2000

Aerial Image, NTS

KEY

Existing Metropolitan Open Land (MOL) boundary

Proposed Metropolitan Open Land (MOL) boundary

Denotes land proposed to be removed from MOL status

for consultation

□□□□	□□ □□□ □□□d□ □□□ 00 17.08.2016 Issued for first consultation on the draft Local Plan	N

WALTERS & COHEN ARCHITECTS

2 Wilkin Street
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mail@waltersandcohen .com

St Paul's School, Masterplan

1604-PR-1002
MOL boundary

Checked by	Scale	Date Drawn	Job No.	Drawing No.	Revision
MAC	1:2000@A1	17.08.2016	1604	1604-PR-1002	00

Viewpoint 1

Viewpoint 2

Viewpoint 3

Viewpoint 4

Viewpoint 5

Viewpoint 6

Viewpoint 7

Viewpoint 8

Viewpoint 9

Viewpoint 10

Viewpoint 11

Viewpoint 12

Viewpoint 13

September 2016

"LOCAL GREEN SPACE" DESIGNATION

Herewith an application for Udney Park Playing Fields to be granted the status of "Local Green Space" as part of the forthcoming Local Plan consultation, from the Teddington Society and the Friends of Udney Park Playing Fields

Dear Mr Chadwick, Cllr Fleming and Cllr Arbour,

As part of the Local Plan consultation process communities have the opportunity in the National Planning Policy (NPP) framework to propose locations for Local Green Space designation. The NPP Guidance for Local Green Spaces Paragraph 6 states **Local Green Space designation is for use in Local Plans or Neighbourhood Plans. These plans can identify on a map ('designate') green areas for special protection. Anyone who wants an area to be designated as Local Green Space should contact the local planning authority"**

We welcome the ACV designation greatly, and were relieved that Quantum, the current private equity firm that owns the Playing Fields embraced the ACV (presumably after legal advice that the LBRUT decision would not be over-turned by a judge at Tribunal). However, ACV is not directly part of the Planning Framework whereas Local Green Space provides protection in Planning Policy. In the Planning Practice Guidance, the attachment to the NPP, Paragraph 22 states **"Land designated as Local Green Space may potentially also be nominated for listing by the local authority as an Asset of Community Value. Listing gives community interest groups an opportunity to bid if the owner wants to dispose of the land".** So, Local Green Space is a direct vehicle defined in the NPP to help local authorities enforce Planning Policy for their Village Plans, ACV is a complementary legislation with the purpose of enabling communities to buy the land in question.

We understand from Policy document that a full justification for Local Green Space designation should be registered with the "local planning authority" so herewith is our rationale and application for Udney Park Playing Fields

The Natural Environment White Paper (The Natural Choice: securing the value of nature 2011) highlighted "the importance of green spaces to the health and happiness of local communities".

Green spaces, particularly natural green spaces, located close to local people provide a range of social, environmental and economic benefits, including –

- improved mental and physical health
- increased social activity
- increased physical activity
- increased voluntary action
- improved community cohesion and sense of belonging
- climate change adaptation for example by flood alleviation

The White Paper recommended that a new Green Areas designation be introduced that would give local people an opportunity to protect green spaces that have significant importance to their local communities.

> " We propose that green spaces should be identified in neighbourhood plans and local plans which complement and do not undermine investment in homes, jobs and other essential services. Given the importance of green spaces to the health and happiness of local communities the Government considers the new designation should offer suitably strong protection to localised areas that are demonstrably special …."

Local Green Spaces are now incorporated into the NPP and it is that designation we are applying for Udney Park, which remains under grave threat of partial development. The National Planning Policy provides the following information on Local Green Space designations -

> 76. Local communities through local and neighbourhood plans should be able to identify for special protection green areas of particular importance to them. By designating land as Local Green Space local communities will be able to rule out new development other than in very special circumstances. Identifying land as Local Green Space should therefore be consistent with the local planning of sustainable development and complement investment in sufficient homes, jobs and other essential services. Local Green Spaces should only be designated when a plan is prepared or reviewed, and be capable of enduring beyond the end of the plan period.
>
> 77. The Local Green Space designation will not be appropriate for most green areas or open space. The designation should only be used:
>
> - where the green space is in reasonably close proximity to the community it serves;
> - where the green area is demonstrably special to a local community and holds a particular local significance, for example because of its beauty, historic significance, recreational value (including as a playing field), tranquility or richness of its wildlife; and
> - where the green area concerned is local in character and is not an extensive tract of land.
>
> 78. Local policy for managing development within a Local Green Space should be consistent with policy for Green Belts.

We have completed a template attached based against the key criteria in the National Planning Policy Framework for Local Green Spaces and the associated "Planning Practice Guidance"

http://planningguidance.communities.gov.uk/blog/guidance/open-space-sports-and-recreation-facilities-public-rights-of-way-and-local-green-space/local-green-space-designation/

We trust you find our application for Local Green Space designation to be an appropriate case for the Policy to deployed and so provide additional protection for Udney Park. Whilst Udney Park is already an OOLTI, Local Green Spaces NPP Guidance Para 20 states **Designating a green area as Local Green Space would give it protection consistent with that in respect of Green Belt,** which increases the prospect of saving ALL of Udney Park

Yours sincerely

Completed by Mark Jopling on behalf of the

The Teddington Society Friends and the Friends of Udney Park Playing Fields

CRITERIA FOR LOCAL GREEN SPACE DESIGNATION

1	**General Information**	**Tick if relevant evidence provided**
{"IsDistinguishe	Name and address of site *Some sites have several names and all known names should be given*	
	Udney Park War Memorial Playing Fields (formerly know as St Mary's Hospital Athletic Grounds) Udney Park Road Teddington TW11 9BG	
1.2	Site location plan	
		
1.3	Organisation or individual proposing site for designation *This will normally be a Town or Parish Council or a recognised community group*	
	The Teddington Society and the Friends of Udney Park Playing Fields	
1.4	Ownership of site if known *Information on land ownership can be obtained from the Land Registry. Some land parcels are not registered however local people may know the owner.*	
	Quantum Teddington LLP 170 Charminster Road Bournemouth Dorset BH8 9RL	

1.5	Is the owner of the site aware of the potential designation? Do they support the designation? (Sites may be designated as Local Green Spaces, even if there are objections from the site owners)	
	No they are a private equity property investment company who acquired the site for speculative development, despite the clarity in NPP Para 74 that: "Existing open space, sports and recreational buildings and land, including playing fields, should not be built on unless: o an assessment has been undertaken which has clearly shown the open space, buildings or land to be surplus to requirements; or o the loss resulting from the proposed development would be replaced by equivalent or better provision in terms of quantity and quality in a suitable location; or o the development is for alternative sports and recreational provision, the needs for which clearly outweigh the loss"	
1.6	Photographs of site	
		
1.7	Community served by the potential Local Green Space *i.e. does the site serve the whole village/town or a particular geographic area or group of people?*	
	Udney Park Playing Fields serves the sports clubs and schools of Teddington. The clubs that use the fields: Teddington Cricket Club, Richmond Cricket Club, Teddington Rugby Football Club, Teddington Athletic Football Club etc have adult and junior members from across the Richmond Borough	
2	**Planning History**	
2.1	Is there currently a planning application for this site? If permitted/allocated, could part of the overall site still be used as a Green Open Space?	
	There are NO current planning applications for Udney Park Playing Fields though the owner has signaled their intentions to build a large development	

2.2	Is the site allocated for development ? If allocated, could part of the site still be used as a Green Open Space?	
	Udney Park Playing Fields is designated by LBRUT as an Other Open Land of Townscape Importance (OOLTI). The current Local Development Framework states in 8.2.4 CP10: **The open environment will be protected and enhanced. In particular the Borough's OOLTI's will be safeguarded and improved for biodiversity, sport and recreation and heritage, and for visual reasons.** Furthermore, the local LBRUT assessment, using the mandated Sport England methodology, of Outdoor Recreation Space and Playing Pitches, shows a deficit of pitches and is explicit about retaining Udney Park.	
3	**Size, scale and "local nature" of proposed Local Green Space**	
3.1	Area of proposed site *It is unlikely that a site of over 20ha (50 acres) would be considered*	
	Udney Park Playing Fields are existing playing fields and are 13 acres in size, which in an urban setting is a substantial piece of recreational space though within the 5 acres to 50 acres Policy Guidance for Local Green Space. The Playing Fields are situated in the heart of Teddington, easily accessed on foot or public transport by the community.	
3.2	Is the site an "extensive tract of land"? *(Extensive tracts of land cannot be designated as Local Green Space) e.g. how large is it in comparison to other fields; groups of fields; areas of land in the vicinity etc.? Does the site "feel" extensive or local in scale?*	
	Udney Park Playing Fields are not "extensive" in the sense described in the NPP Guidelines, they are not a large piece of open land, they are an existing and active Playing Field	
3.3	Is the proposed site "local in character"? *e.g. does the site feel as though it is part of the local area? And why? How does it connect physically, visually and socially to the local area? What is your evidence?*	
	Udney Park Playing Fields are "local in character". Physically? The site is overlooked by local property on all 4 sides and is very much sited in the heart of the Teddington community. Visually? The green space of Udney Park provides a healthy break in the built-up area of Central Teddington. The Playing Fields are part of the local "Green Infrastructure" and play and have the future potential play a significant role in the community. Socially? Most local sports clubs have waiting lists due to lack of playing and training space. The new owners have granted a temporary licence to local sports teams and the fields are now once again being fully used. The Pavilion is also used for community events such as MacMillan coffee mornings.	

4	**Need for Local Green Space**	
4.1	Is there a need for a local green space in this location? *e.g. is there a shortage of accessible greenspace in the area? Is there a Neighbourhood Plan or Open Spaces, Sport and Recreation Assessment that provides evidence of that need.*	
	National Planning Policy requires that local authorities conduct a thorough assessment of outdoor recreation and playing pitch capacity, following a statutory Sport England methodology. This is a very detailed measurement of supply and demand for sporting facilities. In June 2015 LBRUT published their own statutory Open Space, Sports and Recreation Needs and Opportunities Assessment, using independent experts and approved by the LBRUT Cabinet in June 2015. Overall conclusions are typified by Para 3.7 which states "Ensure through the use of the Playing Pitch Strategy that sports facilities are protected through the implementation of local policy". The report finds local community sports membership is growing and there is insufficient playing space. **In the accompanying Playing Pitch Strategy the specific scenario of the loss of Udney Park was evaluated and the conclusion was that Udney Park is a "Strategic Site" (the highest level of designation) and Policy is that LBRUT should "Protect, Provide and Enhance" Udney Park Playing Fields** The existing Local Plan identifies this locality as poorly provided for with Public Open Space. Udney Park is already an Asset of Community Value and Para 8.1.15 of Local Policy 28 (Social and Community Infrastructure) of the Local Plan states that "loss of Assets of Community Value will be strongly resisted"	
5	**Evidence to show that "the green space is in reasonably close proximity to the community it serves"** ***Please indicate what evidence you have provided against each point.***	
5.1	How far is the site from the community it serves? Is the site within 2km of the local community?	
	The map provided shows the fields within the community, adjacent to the local population at 0 Km. Per section 3.3, the site is surrounded by a mix of social and private housing and retirement flats. It is sited at the heart of Teddington and walkable for most of the local population.	
5.2	Are there barriers to the community accessing the site from their homes?	
	There are no barriers to access, the site is fenced though access is available via unlocked gates	

6	**Evidence to show that the green area is "demonstrably special to a local community"** ***Please indicate what evidence you have provided against each point.***	
6.1	Evidence of support from Parish or Town Council *e.g. letter of support; Council minutes*	
	On 31st March 2016 LBRUT added Udney Park to its register of Assets of Community Value, the criteria of which require a site to be for "social well-being of a community". Paragraph 22 of the Local Green Space policy, an accompanying document to the National Planning Policy states: **Land designated as Local Green Space may potentially also be nominated for listing by the local authority as an Asset of Community Value. Listing gives community interest groups an opportunity to bid if the owner wants to dispose of the land.** Hence, ACV and Local Green Space are complementary designations, ACV gives a "right to bid", and Local Green Space provides extra protection in the Planning framework. When Udney Park was originally sold in 2015 three different community bidders tried to by the site.	
	On 10th March 2016 LBRUT convened a public meeting as part of the Teddington Village Plan consultation. Lord True said "On March 10th 2016 Lord True, leader of LBRUT, re-states publicly that the Teddington Local Village Plan, a statutory part of UK National Planning Policy, includes LBRUT express opposition to ANY development on Udney Park Playing Fields: **"we (LBRUT) are very clear that we don't support any residential development on Udney Park Playing Fields".** --- **Sadiq Khan made a manifesto commitment to protect Udney Park** **From:** Sadiq <sadiq@labour.org.uk> **Subject: RE: [londonregion] Gareth Bullock left feedback on Contact** **Date:** 17 March 2016 16:58:55 GMT **To:** "garethbullock@aol.com" <garethbullock@aol.com> Dear Gareth, Thank you for contacting us about concerns over losing green spaces. I appreciate you took the time to get in touch with your concerns, especially raising the case of green spaces in Teddington. **Sadiq will strengthen protections for open spaces within the London Plan, including playing fields, Metropolitan Open Land, and our Sites of Importance for Local Nature Conservation and nature reserves.** --- - On 15th July 2015 councilor and GLA member Arbour, raised the issues with the Mayor, a statutory consultee playing fields: The Mayor replied: ***"The London Plan policy is absolutely clear that you cannot have a loss of open space. I note that it was donated specifically for use as rugby union pitches. It would be an absolute scandal and an outrage if that land was lost for that purpose"***	

6.2	Evidence of support from other local community groups or individuals. *e.g. letters of support; petitions; surveys etc.*	
	Several local sports clubs recommended to members they attend the Quantum consultation and say they were against ANY development (see Appendix A Teddington CC and Appendix B Hearts of Teddlothian) Friends of Udney Park has circa 300 households as registered supporters, the Teddington Society is the largest community group in the locality At the recent Teddington Fair we engaged with the public, 79/80 who visited signed our petition and supported zero development on Udney Park	
6.3	Evidence of support from community leaders	
	Vince Cable and Tania Mathias both publicly support the total retention of Udney Park for sport. Vince Cable met with the former owners Imperial and urged them to sell to a community group, indeed one of the community groups trying the buy Udney Park Playing Fields attended the meeting with Vince and the President of Imperial. Stephen Knight, local senior Lib Deb councilor described the attempts by Quantum Teddington to solicit public support by giving some sports clubs free temporary access to the fields as a **"grubby little deal"**	

6.4	Evidence of support from other Government and NGO groups *e.g. letters of support from organisations*	

Generically various UK National Government Policy is unequivocal on protecting Green Space by preventing any building on playing fields:

- The UK National Planning Policy Section 8 Paragraph 74 states explicitly: **"Playing Fields should not be built on"**
- The new "Sporting Future" UK Policy released on 19th December 2015 is about sports participation to address "physical wellbeing, mental wellbeing, individual development, social, community and economic development"...to "harness the power of sport for the good of our whole society (David Cameron)". Paragraph 8.2 states "**existing sport recreational buildings and land should not be built on** unless the sites have been assessed as surplus to requirements"
- The new "Start active, stay active" UK National Policy for Health updated on 11th March 16 by the UKs Chief Medical Officers "Whatever our age, there is good scientific evidence that being physically active can help us lead healthier and happier lives, inactivity is a silent killer". Page 49: "**as there is increasing pressure on open space, it becomes more important to protect parks and green spaces"**

-

Specific to Udney Park the following important NGOs have supported the demand for zero development on Udney Park

- The London Playing Fields Foundation (LPFF) is a registered charity founded in 1890 and granted a Royal Charter in 1925. It is the main charity for the provision, protection and promotion of playing fields in London. In a letter to ICL on 7th July 2015 their CEO wrote (App. C) **"The LPFF position is clear, Udney Park Playing Fields to be retained as a grass playing field, and to see it used for sport and recreation purposes as opposed to other uses. The Friends of Udney Park Playing Fields have the full support of the LPFF"**

- London Sport is the NGO set up to delivery the London 2012 legacy of community benefit from hosting the Olympics. In a letter to ICL their CEO Peter Fitzboyden wrote "**There is significant local opposition to the sale of this site for development and a strong consensus that it should be retained for sport and recreation purposes. London Sport would wish Udney Park Playing Fields to be retained as a grass playing field, and to see it used for sport and recreation purposes as opposed to other uses. We would welcome the opportunity to work with the Friends of Udney Park Playing Fields, Sport England, the Greater London Authority, relevant National Governing Bodies of Sport, to develop alternative propositions that protect the legacy that the playing fields were intended to provide when gifted in perpetuity by Lord Beaverbrook nearly 8 decades ago"** (App. D)

- Fields in Trust "protects vital open spaces" and will soon register recreation spaces at risk of being lost forever to preserve these spaces in perpetuity. "**We will include Udney Park at launch".**

7	**Evidence to show that the green area "holds a particular local significance, for example because of its <u>beauty</u>,"** (if applicable)	
7.1	**Is this criteria relevant to this site ?**	
	Yes, partially	
7.7	Is the site highlighted in literature or art?	
	The site is mentioned in autobiographies of significant sporting figures, for example Sir Roger Bannister, who was a St Mary's student when he broke the 4 minute mile. The generous donation of the site by Lord Beaverbrook is also referenced in numerous writings about his life and contribution to Britain in the 20th Century	
8	**Evidence to show that the green area "holds a particular local significance for example because of its <u>historic significance</u>" (if applicable)** ***Please indicate what evidence you have provided against each point.***	
8.1	**Is this criteria relevant to this site ?**	
	YES	
8.2	Are there any historic buildings or remains on the site?	
	The War Memorial Pavilion was built in 1919 as a tribute to the fallen fathers from Merchant Taylor's School, and to provide recreation for a generation of WW1 orphans. The Pavilion, a fantastic Edwardian example of such a building, remains a designated War Memorial and is a classified as a Building of Townscape Merit	
8.3	Are there any important historic landscape features on the site?	
	The site is surrounded by mature trees, many of which are now protected by Tree Preservation Orders	
8.4	Did the site play an important role in the historic development of the village or town?	
	The site is historically significant, before the Railway arrived it was part of the local estate. The land was protected from development as Teddington expanded post the arrival of the suburban railway, before its formal creation as a playing field in 1919.	
8.5	Did any important historic events take place on the site?	
	No	
8.6	Do any historic rituals take place on the site?	
	No	

9	**Evidence to show that the green area "holds a particular local significance, for example because of its <u>recreational value</u> (including as a playing field)",**	
9.1	**Is this criteria relevant to this site ? YES**	
	This criteria is critical to the evaluation of Udney Park Playing Fields as a Local Green Space Since 1996 Sport England are a Statutory Consultee on all building development on recognised playing fields, whether publicly or privately owned. Udney Park was given to the state as the original benefactor gave the site to a public body, St Mary's Hospital. The site was sold from state ownership by Imperial College to Quantum Teddington. Unfortunately tertiary institutions such as Imperial are not covered by the legislation that applies to the rest of the education sector that they cannot sell state owned playing fields without Secretary of State permission. The Sport England policy states clearly: **"Sport England opposes development on playing fields in all but exceptional cases, whether the land is public, private or educational use"** There are 5 exceptions defined in Policy: E1 A quantified assessment of current and future needs has demonstrated to the satisfaction of Sport England that there is excess playing pitch provision in the catchment area **UPPF is in the LBRUT Playing Pitch assessment and the conclusion is that there is a shortage of playing space** E2 The proposed development is ancillary to the principal use of the playing field **Quantum intend to apply for permission for luxury retirement flats, which results in loss of playing space and is not ancillary** E3 Proposed development affects only land incapable of a playing pitch and does not result in a reduction of size of playing space **Quantum's phase 1 intentions are to take 34-40% of playing space** E4 Any loss of space would be replaced with equivalent quality **There are no known alternatives to replace any possible loss of Udney Park or any offered by Quantum** E5 The development is for sports facility which would outweigh the loss of current fields **Whatever Quantum offer with the remaining part of the site they do not wish to build on, the net consequence of any development is less recreation space and playing pitch capacity. Alternative local bidders would also enhance the site though would enhance the entire site, not a portion of it.** Hence, Sport England, as none of the 5 Exceptions are met, are highly unlikely to support development on Udney Park and so make its designation as Local Green Space as a logically appropriate step forward to protect the playing fields during this Village Plan consultation	

9.2	Is the site used for playing sport? *If so what sport? How long has it been used for sports provision? Is this sports provision free or is a club membership required?*	
	Yes, Udney Park is a maintained playing field since 1919, when opened as playing field for Merchant Taylors School in memory of fallen parents. In 1937 MTS moved from Central London to NW London and no longer needed a separate playing field. Lord Beaverbrook bought the War Memorial Playing Fields and donated them to St Mary's Medical School, later taken over by Imperial College London (ICL), giving 12.5 acres of land in Teddington specifically for use in perpetuity for amateur rugby. He did what we believe was the absolute maximum possible legally at the time in a covenant in favour of what is now the Rugby Football Union, who have a veto on change of use. The covenant below is extracted directly from the Land Registry, which is not a time-bound clause. ***The following are details of the covenants contained in the Conveyance dated 30 April 1937 referred to in the Charges Register: "THE Purchasers hereby COVENANT with the Rugby (Football) Union Trustees AND IT IS HEREBY AGREED AND DECLARED as follows: 1. THAT the Purchasers shall not without the consent of the Rugby (Football) Union Trustees use the property hereby assured or any part thereof for any other purpose during the appropriate season than as a sports ground for the playing of games by Amateurs*** So it is categorically clear what Beaverbrook's intentions are, he donated the fields in perpetuity, and if the Local Green Space classification existed in 1937 it is reasonable to suggest he would have proposed such a status then. The site is not open to general play, the 3 pitches are maintained and enclosed and all users are community sports clubs with membership and local schools with a shortage of space. Most of the local clubs operate a subsidized membership or waiver for families that cannot afford subscriptions but wish to partake in junior sport. It is also important to note that the criteria for ACV, already passed, include an assessment of current or future potential of a site to produce "social well-being", which Udney Park Playing Fields has passed on the basis of being a long-established playing field	
9.3	Are the public able to physically access the site?	
	The site is used by sports clubs though is not Public Open Space today	
9.4	Is the site used by the local community for informal recreation? And since when?	
	The site is enclosed though some informal ball games occur	
10	**Evidence to show that the green area "holds a particular local significance, for example because of its <u>tranquillity</u>" (if applicable)**	
10.1	**Is this criteria relevant to this site ?**	
	NO	

Appendix A Letter from Teddington CC to members

Teddington CC U13 Manager u13teddcc@outlook.com 21 Apr

Message to Teddington CC Colts members, via Age Group Managers

EVERY BLADE OF GRASS MATTERS

Many of you will already know about the uncertainty surrounding the future of Udney Park Playing Fields. Teddington CC was part of the "Space to Play" group of local clubs that tried to buy Udney Park last year from Imperial. Unfortunately a late bid by a private developer, Quantum, knocked out all 3 community bidders. TCC are also one of number of local cricket clubs that have used Udney Park as a second ground to make sure we could fulfil our fixtures. Imperial did make Udney Park available for ad hoc hire, local clubs would like to permanently bring the excellent Udney Park Playing Fields to the community.

A little history is relevant: Udney Park was a WW1 War Memorial Playing Field bought by Lord Beaverbrook in 1937 and donated for amateur sport in perpetuity, and protected by covenants as strong as possible in English Law at that time. Beaverbrook was a major industrialist and served in both war-time Cabinets, and in WW2 was Minister responsible for Arms and Aircraft Production and represented Churchill in negotiations with Stalin and Roosevelt. All in all Lord Beaverbrook was a key historical figure whose generous legacy to Teddington should morally be honoured.

The local community is rallying to rescue Udney Park from partial development. Saving ALL of Udney Park is about much more than pitches and wickets, much academic research proves that community sport is essential to lifelong physical and mental health, thriving local sports clubs run by volunteers are vital for a cohesive society. That is why EVERY National Government Policy on Education, Environment, Health and Planning, the Mayor of London and Richmond Council are all committed to protecting Playing Fields. There is no legal case in Planning Policy for ANY of Udney Park Playing Fields to be built upon.

So what can local clubs do ? Quantum are holding a final Saturday consultation on 23rd April at The Pavilion on Udney Park Road. Quantum are seeking local input to their plan to build on around 4 acres of playing space and "donate" the remainder. We cannot allow in Teddington a precedent where a private equity firm can outbid community groups to buy Playing Fields then speculate on the well-being of our community by trying to build on part of them. Teddington Athletic FC have taken a temporary lease to use the fields, which is to be welcomed, though only whilst Quantum seek planning permission.

Several local sports clubs have also asked their junior membership to attend the Consultation on Saturday 23rd between 1000-1400 to register Objections with Quantum to the loss of any green space, and are asking their Junior members to turn up in their club kits and play on the fields. If any TCC members feel that "building on a park" is objectionable then please come down on Saturday and register your Objection with Quantum, and bring a ball to celebrate that Udney Park Playing Fields are for **"PLAY NOT PLOTS"** !

You can follow the campaign to Save Udney Park on the Community Page on Facebook at https://www.facebook.com/Friends-of-Udney-Park-Playing-Fields-716872311786142/ and on Twitter @UPPFFriends

Thanks
Teddington CC Colts

Appendix B Letter from Hearts of Teddlothian FC Chairman to members

From: Jatish Mistry <965711-619259-conversations@messages.pitchero.com>
Date: 13 April 2016 at 22:47:21 BST
To: Matt Ellis <matsellis@gmail.com>
Subject: Udney Park Playing Fields! - Turn up in your Hearts Top

Dear All!□□
QUALITY OF PLAY NOT QUANTUM OF PROFIT!□□
Udney Park Playing Fields in Teddington were sold last year by Imperial College to the speculative developer "The Quantum Group". Udney Park Playing Fields are big enough for three full sized rugby pitches in winter and two cricket pitches in summer with space to spare. It is big enough for football, hockey, tennis and athletics.□□The Fields were gifted to Imperial College, for free, on condition that they were used for sport.□□Quantum Group now want to build on 60% of the land.□□This will mean the loss – forever – of playing fields in the area.□□

There is already a desperate shortage of playing fields in the Borough, and other groups – including amateur rugby teams – bid for the Fields, and would have use them for sport, as the original benefactor always intended. There were rumours that local schools might have used them in the week. There was no shortage of interest from sports users.□□Quantum are now on a charm offensive and have "Open Days" on the site. The last open day is 23rdApril – St George's Day.□□Why not come along at 10 am (or any time up to 2pm) and tell Quantum exactly what you think of them building on any part of this Corner of England's Green and Pleasant Land. Tell them what you think of the loss of cricket pitches. Tell them what you think of the loss of safe spaces for athletics, hockey, tennis and running. Tell them what you think of the loss of football pitches. Tell them – in the year England won the Grand Slam – what you think of the loss of rugby pitches. □□
Turn up in sports kit, bring the children in sports kit! Football kit, cricket whites, hockey kit, running shoes, or even rugby kit – it matters not! This is not an official "Harlequins" or any other event, this is about individuals standing together, so how about international kit! While we are at it, why not bring a ball – any kind of ball, and a bat, or a racket and bring your friends. We might just find somewhere for the children to play touch rugby, or football, or quick cricket, or just run on some wide open grass!□□Let Quantum know, on this St George's Day, that every last blade of grass on Udney Park Playing Fields should be today what they were yesterday, and should be tomorrow – sports fields.

Appendix C. Letter of support from London Playing Fields Foundation, copied to the Minister for Sport

Alice Gast
President
Imperial College London
Prince Consort Road
South Kensington SW7 2AZ

7th July 2015

Dear Ms Gast

UDNEY PARK PLAYING FIELDS Teddington TW11 9BB

The purpose of this letter is to provide London Playing Fields Foundation (LPFF) support to the Friends of Udney Park Playing Fields as they seek to oppose in the strongest possible terms the plan by Imperial College London to sell the site for development. This 12.8 acre site has been used as a sports field for over 78 years as envisaged in the original covenant outlined by Lord Beaverbrook and provides valuable playing fields for children in the London Borough of Richmond. The Foundation have already advised one of the community bidders for the site and recognise the loss of any sports field in the capital will have a serious impact on the opportunities for sports participation in South West London and would be in total contradiction of the London 2012 dream of inspiring a generation to play more sport.

LPFF Role

The London Playing Fields Foundation (LPFF) is a registered charity founded in 1890 and granted a Royal Charter in 1925. It is the main charity for the provision, protection and promotion of playing fields in London and over the past 125 years the LPFF have built up a great deal of knowledge and operational experience in running sports grounds and providing a range of sports development opportunities. We operate seven playing fields across the capital and continue to work with and provide advice to a variety of strategic organisations including Sport England, GLA, and Local Authority partners, National Governing Bodies of Sport, London Marathon Charitable Trust, Football Foundation and different Primary Care Trusts.

By adopting a strategic approach we advocate the need for better protection of playing fields to safeguard them for future generations of Londoners and are working with a range of key partners to reverse the cycle of playing fields decay. Once playing fields are lost to development they are lost forever and we believe that the best form of protection is by using the fields for the primary purpose of sporting and recreational activity.

In seeking to preserve the site for sport and recreation at Udney Park Playing Fields, we believe the site will contribute to widening, increasing and sustaining participation in sport and physical activity.

A number of key issues reinforce the need to retain playing fields within the capital.

- London has 16% of the country's population but only 3% of the playing fields.
- Of the 1500 playing field sites in London the majority are located in outer London boroughs.
- There is increased pressure to find land on which to build new houses to accommodate London's predicted population growth to nine million by 2020.
- The playing pitch distribution across London is uneven and of variable quality.
- Insufficient security of tenure offered to clubs and community organisations inhibit their ability to apply for external funding to improve the site.
- Community playing fields are inherently loss making and as such there has been a lack of investment in their management and maintenance.

Sport England Policy

Playing pitches are important as recreational and amenity features, and provide open space in both urban and rural landscapes. Their development for purposes other than recreation has serious repercussions, not only through the reduction of leisure facilities and the resulting increase in pressure on those remaining, but also in the visual impact created by the loss of open space.

To ensure that informed decisions can be made by local authorities on the future of a playing field, Sport England (SE) requires that all local authorities within England should have an up to date playing pitch strategy, either as a stand-alone document or forming part of a wider open space strategy. This not only seeks to ensure that an assessment of need is carried out, but also that a strategy is put in place in terms of improving accessibility and quality of pitches.

Sport England as the government agency responsible for building the foundations of sporting success has itself adopted a 'Playing Fields Policy', which seeks to resist the loss of playing fields. It aims to ensure positive planning for sport, enabling the right facilities to be provided in the right places, based on robust and up-to-date assessments of need for all levels of sport and all sectors of the community.

To achieve this aim SE will seek to protect sports facilities from loss as a result of development and since1995 has been a statutory consultee on planning applications affecting playing fields. From 1998 local planning authorities have also been required to refer to the Secretary of State any planning applications affecting playing fields which they wish to approve contrary to SE advice.

Given the increased emphasis placed on the protection of playing fields by the Government, it is increasingly important for local planning authorities to demonstrate the adequacy of playing field provision in their area. Despite the encouragement of Sport England, in many local authority areas of London there is still no clear policy guidelines based on a careful assessment of need. We understand that the London Borough of Richmond have very recently completed their Playing Pitch Strategy, the implications of which need to be carefully considered before any further action is taken.

Significantly, if Udney Park Playing Fields is sold for development it would mean the loss, or partial loss of a valuable playing field and would be contrary to National Planning Policy.

Paragraph 73 of the NPPF states:

"*Access to high quality open spaces and opportunities for sport and recreation can make an important contribution to the health and well-being of communities. Planning policies should be based on robust and up to date assessments of the needs for open space, sports and recreation facilities and opportunities for new provision. The assessments should identify specific needs and quantitative or qualitative deficits or surpluses of open space, sports and recreational facilities in the local area. Information gained from the assessments should be used to determine what open space, sports and recreational provision is required.*"

In addition paragraphs 70 and 74 of the NPPF also place great emphasis on the protection of existing sporting facilities and make it very clear on what grounds a playing field can be built on.

Paragraph 70 "*To deliver the social, recreational and cultural facilities and services the community needs, planning policies and decisions should guard against the unnecessary loss of valued facilities and services, particularly where this would reduce the community's ability to meet its day-to-day needs*"

Specifically in paragraph 74 of the NPPF

> *"Existing open space, sports and recreational building and land including playing fields should not be built on unless:*
>
> - *An assessment has been taken which has clearly shown the open space, buildings or land to be surplus to requirements or*
> - *The loss resulting from the proposed development would be replaced by equivalent or better provision in terms of quality and quantity in a suitable location or*
> - *The development is for alternative sports and recreation provision, the needs of which clearly outweigh the loss."*

One of the main reasons why playing fields are under resourced, and therefore vulnerable, is due to the very low appreciation of their potential to contribute to council corporate objectives. The LPFF in supporting the Friends of Udney Park Playing Fields recommend a much more joined up approach to the issue with parks, sports development, education, health and planning departments thinking, planning and working together to not only raise the profile of playing fields but also to restore them to full use for the benefit of local people. We are aware that further discussions are needed on the location of Turing House Free school and that this is also a material consideration in the long term future of the site.

Despite limited public consultation, we also understand that the Friends of Udney Park Playing Fields are considering an application to register the site as an Asset of Community Value (ACV) and would therefore recommend that the ICL Council revise the proposed timescale to allow the community interest group to develop an alternative bid.

In conclusion the local community oppose the scheme and as advocated in the National

Planning Policy Framework local neighbourhood opinion should be sought in determining the local need. There is significant local opposition to the sale of this site for development and a strong consensus that it should be retained for sport and recreation purposes. The LPFF position is clear. It would wish Udney Park Playing Fields to be retained as a grass playing field, and to see it used for sport and recreation purposes as opposed to other uses. The Friends of Udney Park Playing Fields have the full support of the LPFF and if we can be of any further help in the development of the scheme or through our extensive sports development reach then please contact us.

Yours sincerely

Alex Welsh
Chief Executive
London Playing Fields Foundation

cc Tracy Crouch MP Minister of Sport
Kate Hoey MP London Mayor's Commissioner for Sport

Appendix D Letter from London Sport, London 2012 legacy NGO to Imperial Council

ICL Council
Sent via email

9 July 2015

Dear ICL Council member,

Disposal of Udney Park Playing Fields
I am writing concerning your plans to dispose of the land assets, including the playing pitch facilities at Udney Park, to as yet unknown buyers. I would like to take the opportunity to highlight some of the wider strategic considerations across London, which I would urge you to consider carefully when making your decision.
London Sport has been set up by the Mayor of London, Sport England and London Councils to make London the most physically active city on the world. To set us on the way, we aim to get 1m people more active by 2020. This is not for the sake of sport; it is out of a recognition that a physically active population is critical to our society, not least curbing obesity and the numerous associated health issues. This challenge is set against a backdrop of falling participation nationwide, and the fact that London has half the number of leisure facilities per head of population compared to national figures.

When it comes to playing pitches there is an even more acute disparity, with only 3% of the playing pitches nationally located in London whilst serving 16% of the population. This is why every playing facility in London is of vital importance. However, we realise that sport and physical activity does not live in a vacuum. Organisations are facing difficult economic challenges and there are significant housing pressures in London, and so it is not London Sport's Policy to automatically oppose all proposed developments on playing pitches in London; we simply try to ensure there is a comprehensive assessment of each case, that a fair and reflective evaluation and consultation is conducted, and ultimately all other options are considered and exhausted to try to ensure that overall capacity is maintained if not increased.

We understand that the proposed sale is likely to see the site used for a purpose other than sport, despite significant bids from a number of community organisations who have each guaranteed ongoing community sport opportunities at the facility. For this reason London Sport fully support the Friends of Udney Park Playing Fields in their opposition to your plans to sell the site for development. No surplus of playing pitch provision has been identified in the recently developed Open Space and Recreation Needs Assessment for Richmond nor has any suitable alternative been suggested as a replacement for the loss. Furthermore, London is unique in that every pitch in every borough serves all of London, which is why a localised supply and demand assessment is not sufficient to evaluate the impact of a site's loss in any case.

There is significant local opposition to the sale of this site for development and a strong consensus that it should be retained for sport and recreation purposes. London Sport would wish Udney Park Playing Fields to be retained as a grass playing field, and to see it used for sport and recreation purposes as opposed to other uses. We would welcome the opportunity to work with the Friends of Udney Park Playing Fields, Sport England, the Greater London Authority, relevant National Governing Bodies of Sport, other relevant organisations as well as representatives of ICL Council to develop alternative propositions that protect the legacy that the playing fields were intended to provide when gifted in perpetuity by Lord Beaverbrook nearly 8 decades ago.

I hope that this letter is received in the manner it is intended. We do not wish to adversely impact the workings of your organisation, but feel that we all have a collective responsibility for the future health of the city. If London Sport can be of any further assistance in the development of the scheme, please do not hesitate to get in touch.

Yours faithfully,

Peter Fitzpatrick
Chief Executive
London Sport

cc Kate Hoey MP - Mayor's Commissioner for Sport, and Chair of London Sport

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Notes:

Rev:	Notes:	Date:	Dwn:	Iss:

Consultants:

Key / Location:

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Client:

Project:
84 Manor Road
Richmond

Drawing Title:
Site Location Sketch

Drawn By:	Issued By:	Date of First Issue:
MKP	LO	17.08.16

Project No:	Scale @ A3:
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Drawing No:	Revision:
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The Planning Inspectorate

Appeal Decision

Site visit made on 18 April 2016

by Beverley Wilders BA (Hons) PgDurp MRTPI

an Inspector appointed by the Secretary of State for Communities and Local Government

Decision date: 12 July 2016

Appeal Ref: APP/L5810/W/16/3143164
39 Second Cross Road, Twickenham, Richmond upon Thames TW2 5QY

- The appeal is made under section 78 of the Town and Country Planning Act 1990 (as amended) against a refusal to grant planning permission.
- The appeal is made by Mr Anthony Bianchi against the decision of the Council of the London Borough of Richmond-upon-Thames.
- The application Ref 15/1619/FUL, dated 16 April 2015, was refused by notice dated 23 October 2015.
- The development proposed is a new 2 bed house.

Decision

1. The appeal is dismissed.

Procedural Matter

2. Following my site visit the Court of Appeal issued its judgement in the case of the Secretary of State for Communities and Local Government v West Berkshire District Council & Reading Borough Council C1/2015/2559; [2016] EWCA Civ 441. I therefore sought the further views of the main parties as to the relevance of this judgement and have taken into account all responses received by the appropriate deadline in determining the appeal.

Main Issues

3. The main issues are:

- The effect of the proposal on the living conditions of occupiers of nearby residential properties having regard to outlook;
- Whether the proposal would preserve or enhance the character or appearance of the Twickenham Green Conservation Area (CA) in which the site is located, including its effect on existing trees;
- Whether or not the proposal makes adequate provision for vehicle and cycle parking and the effect of the proposal on pedestrian and highway safety having regard to the adequacy of turning facilities;
- Whether or not the proposal would make adequate provision for affordable housing.

Reasons

4. The appeal site comprises part of the rear garden of the dwelling at 39 Second Cross Road. The rear garden of 27 Second Cross Road, the adjacent property is located to one side of the appeal site with the access road to Chilvers Close located to the other. The dwelling at 22b Chestnut Road is on the opposite side of the access road with properties on Chilvers Close to the rear of the site.

Living conditions

5. The proposed two storey dwelling is located very close to the boundaries of the site adjacent to the garden of No 27 and the access road to Chilvers Close. Its height and position relative to the rear garden of No 27 means that it would have an overbearing impact on and significantly adversely affect the outlook from the garden. There are two large trees in the rear garden of No 27 close to the site of the proposed house. Whilst these reduce the outlook from the garden of No 27 towards the appeal site, the outlook from the garden would be further diminished and materially harmed by the proposal. I do not consider that the proposed dwelling would have a significant adverse effect on the outlook from other nearby properties including 22b Chestnut Road. This is having regard to the relative distance between the proposal and these properties.

6. Taking the above matters into consideration, I conclude that the proposal would have a significant adverse effect on the living conditions of the occupiers of 27 Second Cross Road having regard to outlook. The proposal is therefore contrary to Policy DM DC 5 of the London Borough of Richmond upon Thames Local Development Framework Development Management Plan 2011 (DMP), to relevant paragraphs of the National Planning Policy Framework (the Framework) and to guidance contained within the Supplementary Planning Documents relating to Residential Development Standards 2010 (RDS) and Small and Medium Housing Sites 2006 (SMHS). These policies and guidance seek, amongst other things, to protect adjoining properties from visual intrusion and to prevent new dwellings which create an unacceptable sense of enclosure or appear overbearing when seen from neighbouring gardens.

Character and appearance

7. The appeal site is located in the CA. According to the Council's character assessment the CA is formed around the important historic open recreational space of Twickenham Green. The busy Hampton and Staines Roads and the more sedate First Cross Road define the distinctive triangular shape of the green. Second Cross Road and the appeal site are located on the edge of the CA with older cottages on First Cross and Second Cross Roads having distinctive historic long narrow garden plots. The existing dwelling at the appeal site is identified as a Building of Town Merit.

8. As stated above, the appeal site comprises part of the long and narrow rear garden of the dwelling at 39 Second Cross Road. It is at the end of a row of other properties on Second Cross Road with similar long rear gardens with some of the gardens on Second Cross Road backing onto similar gardens to properties on First Cross Road. The appeal site backs onto a small terrace of four properties at Chilvers Close. Vehicular access to the site is via

Chestnut Road, a relatively narrow road comprising two storey terrace and semi-detached dwellings set back slightly from the pavement edge, constructed from a mixture of building materials. There are views from the end of Chestnut Road of mature trees and landscaping within the long rear gardens of properties on First and Second Cross Roads, including of the two mature trees within the garden of 27 Second Cross Road, giving this part of the CA an open and verdant character.

9. The proposed dwelling would front onto the access road to Chilvers Close, would be off-set from the end of Chestnut Road and set back from the front elevation of 22b Chestnut Road. As a result it would only become visible when viewed from towards the end of Chestnut Road meaning that longer range views of the open and verdant rear gardens of First and Second Cross Roads from Chestnut Road would be largely unaffected by the proposal. I acknowledge that long rear gardens such as those at the appeal site are characteristic of this part of the CA and that there is a general presumption against backland development. However in this case for the reasons stated, the appeal site is an exception to and differs from other rear gardens nearby in that it is bounded by development to the rear and the position of the proposal means that it is not prominent.

10. The scale, design and materials proposed are not out of keeping with the mixed character of the surrounding area and the proposed dwelling has a road frontage and utilises an existing access. As such, taking the above matters into account, I do not consider the proposed dwelling would be visually obtrusive, out of keeping with its general surroundings or harmful to the character and appearance of the CA. I also consider that the amount of garden space that would remain for the existing dwelling would be sufficient.

11. However I note that the Council has raised concerns regarding the impact of the proposal on a number of large trees located in the rear garden of the adjacent property 27 Second Cross Road. No arboricultural information was submitted with the application but an Arboricultural Method Statement Implications Assessment and Tree Protection Report (AMS) was submitted with the appeal. I note from the AMS that the large trees located within the garden of No 27 were viewed from the appeal site and that it was not possible to assess the structural condition of either tree. I also note that the proposed dwelling is located within the root protection area (RPA) of one of the trees (T2 Ash) and that the RPA of the other tree (T1 Sycamore) may be affected by the proposed parking and turning area.

12. Both of these trees are clearly visible from Chestnut Road and, due to their height, are also visible from the wider area. Though the proposed dwelling would be sited in front of T2, if retained the upper part of the tree would still be visible from Chestnut Road. The view of T1 from Chestnut Road would be largely unaffected by the proposal. Both trees make a significant contribution to the visual amenity of the area. Though the AMS assumes that both trees are to be retained, given that the trees have not been properly surveyed and the close proximity of the proposed dwelling to T2 in particular, I am not convinced based on the evidence available that retention would be possible. The loss of the trees would have a significant adverse impact on the character and appearance of the CA.

13. Taking the above matters into consideration, I conclude that the proposal would be harmful and would fail to preserve the character and appearance of

the CA. I consider the harm to the significance of the CA would be less than substantial. As such, having regard to Paragraph 134 of the Framework, this harm needs to be weighed against the public benefits of the proposal. Though the proposal would provide an additional dwelling, I do not consider that there are sufficient public benefits associated with the proposal to outweigh the harm to the CA identified.

14. Having regard to the effect of the proposal on trees, it would be harmful and would fail to preserve the character and appearance of the CA. The proposal is therefore contrary to Policy CP7 of the London Borough of Richmond Upon Thames Local Development Framework Core Strategy 2009 (CS), policies DM HO 3, DM HD 1, DM DC 1, DM DC 4, DM DC 5 and DM TP 9 of the DMP, relevant paragraphs of the Framework and to guidance contained within the Supplementary Planning Documents relating to Design Quality 2006 (DQ), RDS and SMHS. These policies and guidance seek, amongst other things, to ensure high quality design, the conservation and enhancement of the character and appearance of Conservation Areas and the protection and retention of trees that make a positive contribution to character.

Parking and highway safety

15. The proposed dwelling would utilise the existing vehicular access located at the end of Chestnut Road. Two off street parking spaces are to be provided for the proposed dwelling and two for the existing dwelling. No details of cycle parking for the proposed dwelling were provided with the application but have been provided with the appeal.

16. A turning head is located at the end of Chestnut Road adjacent to the vehicular access to the site. At the time of my visit I saw that it allows vehicles using Chestnut Road to turn and to exit Chestnut Road onto Staines Road. Parking areas serving properties on Chilvers Close and a property adjacent to the appeal site on Second Cross Road are also accessed from the end of Chestnut Road.

17. Despite the submission of additional information by the appellant, the Council remains concerned about the space available within the site to enable vehicles using the off street parking spaces to enter and leave the site in a forward gear. However from my observations on site I am satisfied that there is sufficient turning space available, though for some spaces this may involve a number of manoeuvres. In any event, there is no evidence that vehicles reversing out of the site onto the road at this point would be harmful to pedestrian or highway safety. I note that the road layout at the end of Chestnut Road and Chilvers Close adjacent to the appeal site allows good visibility of the vehicular access to the appeal site and the residential nature of the roads and presence of parked vehicles means that vehicles are unlikely to be travelling at speed. I am also satisfied that there is sufficient space within the site to accommodate cycle parking and that this matter could adequately be controlled by a planning condition.

18. Though a number of concerns have been raised in relation to the amount of car parking proposed for the existing and proposed dwellings, I note that no such objections were raised by the Council which found compliance with Policy DM TP 8 of the DMP. Whilst at the time of my visit I noted the high demand for on street parking along Chestnut Road, I also noted the accessible location of the

site and have no substantive evidence that leads me to disagree with the Council's conclusion in relation to this issue.

19. Taking the above matters into consideration, I conclude that the proposal makes adequate provision for vehicle and cycle parking and for turning facilities and would not result in a significant adverse impact on pedestrian or highway safety. It therefore accords with policies DM TP 2, DM TP 6, DM TP 7, DM TP 8 and DM DC 1 of the DMP, the Council's Supplementary Planning Document on Front Garden and Other Off Street Parking Standards 2006 (FGOOSP) and Manual for Streets 2007 (MFS). These policies and guidance seek, amongst other things, development to provide an appropriate level of off street parking and secure cycle parking facilities, to have adequate access facilities and to protect the pedestrian environment. However, notwithstanding the conclusion on this issue, I consider that the harm to the character and appearance of the area and living conditions is of overriding importance.

Affordable housing

20. On housing sites capable of accommodating less than ten units, Policy CP15 of the CS and Policy DM HO 6 of the DMP require a financial contribution to affordable housing commensurate with the scale of the development.

21. The appellant initially stated a willingness to make a financial contribution to affordable housing in accordance with Policy DM HO 6 of the DMP. However a planning obligation securing the required financial contribution for affordable housing was not submitted with the appeal as the appellant considered that the matter could be adequately dealt with by a negatively worded planning condition.

22. On 28 November 2014 a Written Ministerial Statement (WMS) was published which sets out Government policy on Section 106 obligations and included setting a threshold beneath which affordable housing contributions should not be sought. The WMS was however subject to a High Court judgement on 31 July 2015 upholding a joint application by West Berkshire District Council and Reading Borough Council challenging the WMS, after which the WMS was no longer a material consideration.

23. However the Court of Appeal judgement on 11 May 2016 has now upheld the Secretary of State's appeal on all grounds and overturned the High Court judgement. Consequently the WMS is again a significant material consideration and sets out the circumstances when affordable housing contributions should not be sought. These circumstances include developments of 10 units or less which is the case with the proposal. New and updated paragraphs have been added to the Planning Practice Guidance (PPG) section on planning obligations to reflect this.

24. Both parties have been consulted on the Court of Appeal judgement. The Council has responded stating that there is evidence that affordable housing need remains substantial and that small sites make a significant contribution to housing supply and therefore need to contribute to affordable housing provision through continued implementation of Policy DM HO 6. Reference is also made to an undersupply of affordable housing as set out in the Council's draft Strategic Housing Market Assessment (SHMA).

25. The approach set out within the WMS, which is reiterated in the PPG, provides clarification on national policy and is to be read alongside the Framework. The

WMS is therefore a significant material consideration in the determination of this appeal. The proposal conflicts with policy DM HO 6 in that it makes no contribution towards local affordable housing provision. Notwithstanding this, the conflict is outweighed by the change in Government policy on affordable housing contributions, as set out in the WMS. On that basis, I consider that a contribution towards affordable housing is no longer required. However, I again consider that the harm to character and appearance and living conditions carries greater weight.

Other Matters

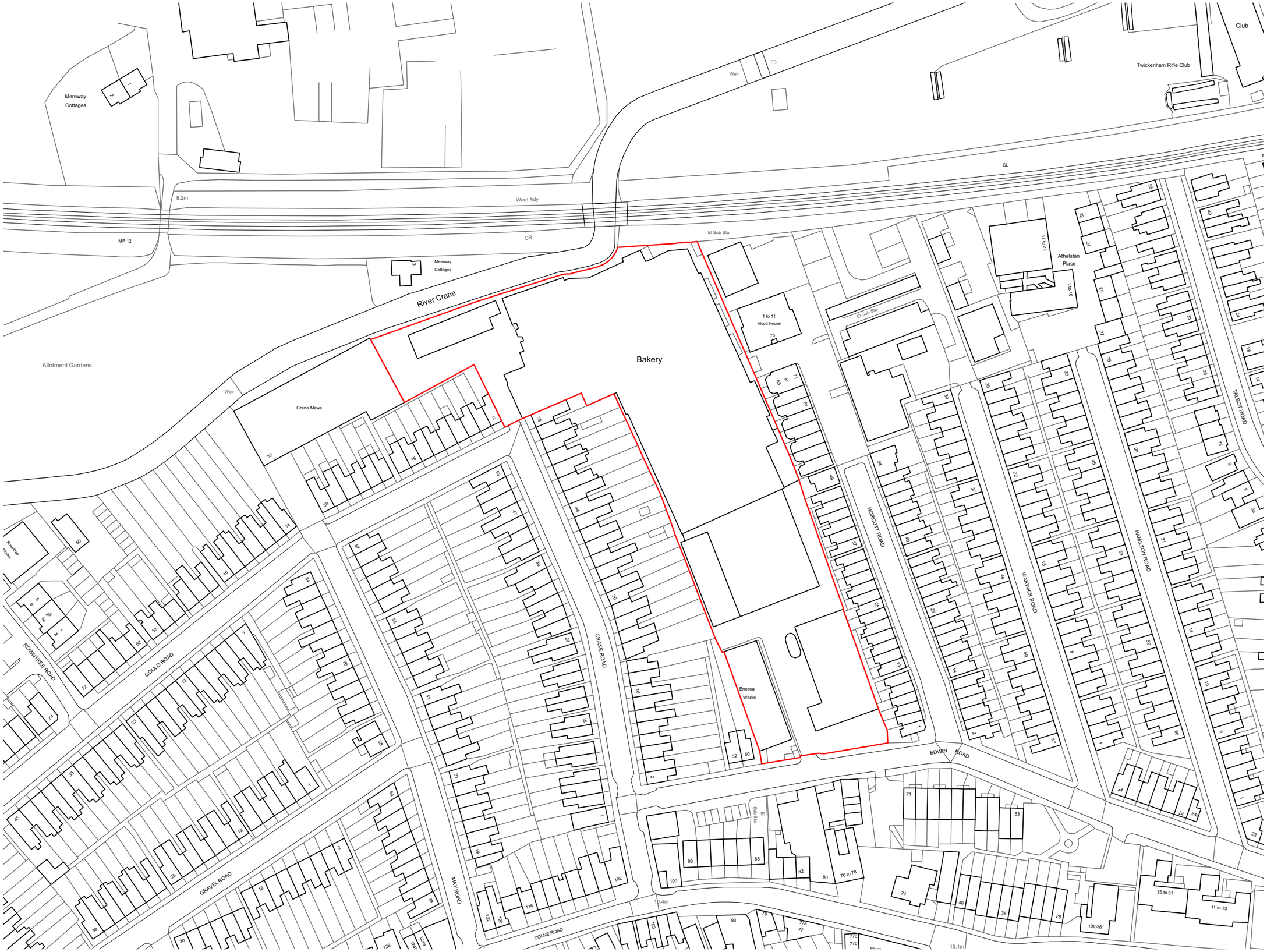
26. The proposal would provide an additional dwelling in an accessible location with access to a range of services and facilities. However neither this or any other matters are of such significance to outweigh the considerations that have led to my conclusions on character and appearance and living conditions.

Conclusion

27. For the above reasons and having regard to all matters raised, I conclude that the appeal should be dismissed.

Beverley Wilders

INSPECTOR



1 Location Plan
Scale: 1:1250

0 5 10 15 20 M

1:1250

A3

NOTES:

Site application boundary

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AYRE CHAMBERLAIN GAUNT

PROJECT
Gould Road
Twickenham

DRAWING TITLE
Location Plan

REV	DATE	NOTES
A	25/2/16	Issue for pre-planning application

DRAWN BY	CHECKED BY
AW	GW

JOB NO.	STATUS
216	Planning

DRAWING NO.	REV
216_PLN_001	A

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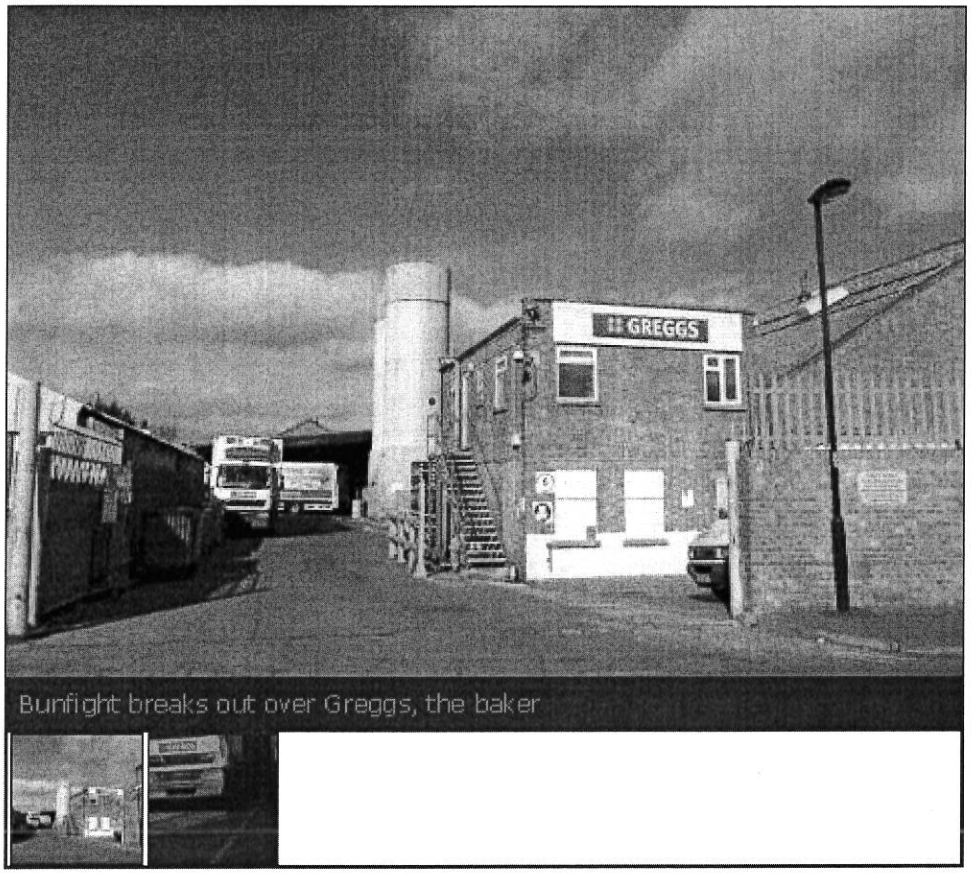
RICHMOND

Bunfight breaks out over Greggs' Twickenham depot

Exclusive By Rachel Bishop 5:40pm Friday 24th February 2012 in Richmond



Bunfight breaks out over Greggs, the baker

A Greggs lorry was allegedly attacked at a depot in Twickenham last night and one man attempted to block others getting into the site this morning.

A shower screen and white paint were allegedly thrown at the lorry, which was parked in the depot serving 138 stores across London and the south-east.

Greggs has reported the incident to the police and said it was treating it "with great concern".

Neighbours have complained about the noise caused by HGV lorries that often lined Edwin Road, where the industrial-scale bakery is situated.

Alan Martin, of Edwin Road, has lived on the street for 24 years with his wife, Sue Powell, who has lived there for 35 years.

This morning he was so incensed by problems the lorries were causing, including noise and congestion which he said made a young mother dodge through each vehicle, that he stood in front of one and refused to move.

The 62-year-old sculptor said: "I saw out the window one of the mums with a pushchair avoiding the trucks. I went out to her and she said she was used to it.

"The main problem is the noise the lorries make, but there's also problems with litter, congestion and parking - with the workers parking along the street."

However, despite his actions this morning, he did not agree with the attack on the lorry last night.

He said: "I don't think that's right. I do not agree with that kind of action."

Manager Amanda Eastlaugh called a meeting with residents on Wednesday, February 22, which attracted about 50 people.

Following the meeting, residents joined forces and were now planning a campaign against Greggs.

After just six weeks living across the road from the site Edwin Road resident, Simon Baird, 34, distributed a leaflet to neighbours, calling for Greggs bosses to relocate the site or ban lorries accessing the site between 10pm and 6am.

He said: "I think the meeting has actually been more detrimental to them, because now we have all met and exchanged numbers. There's a really strong community spirit."

Mr Baird's housemate, Tim Spurling, 34, who has lived at the property for three-and-a-half years, had been aware of problems with the site for a long time.

He said: "People are getting to the stage where they cannot take anymore – especially the older residents."

Mr Baird, whose bedroom is at the front of the house, said he was often woken throughout the night by the trucks and the busiest times were at midnight, 2am and 5am.

The next step for residents was to take the matter to the council, with the possibility of seeking a noise abatement notice for the site.

A Greggs spokesman said: "We understand residents are concerned and we are treating their concerns seriously.

"We will try to do as much as possible. We are now looking at ways to reduce the impact on the local people."

The battle between Edwin Road residents and Greggs has been long running, with one person stating at the meeting on Wednesday that he had been fighting against these problems for 50 years.

Mr Martin said: "I think that they have outgrown their premises, because they have trucks queuing in the road – whereas they should be in the depot.

"They need to go. We all want them to go."

Police were unable to comment.

Comments(3)

Teddington Resident says...
8:01pm Fri 24 Feb 12

> This company ought to be curbed, they are popping up everywhere selling poor quality products at inflated prices. I believe they originated in the north, it would be good if they went back there and stayed there."

REPORT THIS POST » **REGISTER/LOG IN »**

twickersargyle says...
11:13pm Fri 24 Feb 12

> It's about time a stand was made against the Gregg's factory. We used to live in Crane Road and the noise from their extractor fans was horrendous—and it was 24 hours a day, seven days a week. It is a ludicrous place to have such a huge industrial plant and they

should relocate asap—though they told us they were moving for for five years, and they never did."

REPORT THIS POST » REGISTER/LOG IN »

Gareth Roberts says...
12:02am Sun 26 Feb 12

There you go, Twickersargyle, we have more in common than you thought; I also used to live in Crane Road. About 12 years ago.

As it happens my car came off the worse after a Greggs Van reversed into it, crunching up the door and shoving the whole back of the car up onto the pavement. It then drove into the yard as if nothing had happened. Fortunately a neighbour spotted what happened and let me know.

What was particularly galling was the attitude of the drivers and the site foreman. "Got any proof? Not our problem if there's no proof" was very much the order of the day - it was when I did my CSI Twickenham routine and took them to the lorry in question and pointed out the red paint flecks and scuff marks all over the back there was a collapse of stout party."

REPORT THIS POST » REGISTER/LOG IN »

Nathaniel Lichfield & Partners
Planning. Design. Economics.

LB Richmond Employment Land Assessment

Final Report

Greggs Plc

19 August 2016

15334/MS/LBa

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Contents

1.0 Introduction

1.1 Greggs Plc ('Greggs') commissioned Nathaniel Lichfield & Partners ('NLP') to prepare an assessment of employment land issues in the London Borough of Richmond ('LB Richmond') and the area of Twickenham specifically.

1.2 The assessment has been prepared in the context of Gregg's interests at the Gregg's Bakery site on Gould Road, Twickenham, and particularly focuses on the future need for employment land in this location. The purpose of the report is to examine the case for the retention of industrial employment uses as opposed to redevelopment of the site for residential-led mixed uses to potentially include some commercial space for start-up businesses.

Approach

1.3 In preparing the employment land assessment, NLP has undertaken the following:

1 A review of key employment land evidence base reports and emerging Local Plan policy for LB Richmond overall and the area of Twickenham specifically.

2 A review of relevant property and other market characteristics and statistics, including discussions with commercial property agents active in the South West London commercial property market.

1.4 NLP has had regard to relevant guidance contained in the National Planning Policy Framework (NPPF) and Planning Practice Guidance (PPG) and the firm's experience of producing employment land reviews and related assessments for a range of local authority and private sector clients.

Structure of Report

1.5 The report is structured as follows:

- Background to the site, planning policy context and review of the Borough's employment land evidence base (Section 2.0);
- Overview of current property market signals and stock of employment space in LB Richmond and Twickenham (Section 3.0);
- Consideration of the qualitative challenges faced by the Greggs Bakery site and how these are likely to influence the site's ability to accommodate industrial uses over the longer term (Section 4.0);
- Section 5.0 assesses the overall case for the redevelopment of the site for a residential-led mixed use scheme in the context of employment land demand and supply factors and market signals.

2.0 Site Context and Background

2.1 This section provides an overview of the Greggs Bakery site and reviews the Council's planning policy and evidence base on employment land needs to provide a context for the assessment.

Site Context

2.2 The site is located on Gould Road in Twickenham, the largest district centre in LB Richmond. A site location plan is included in Figure 2.1. It currently comprises industrial buildings that are used for production facilities by Greggs Bakery. This operation falls within the B2 Use Class. The site is an inverse 'L' shape that extends to 1.1 ha. The buildings take approximately 85% of the site extent with limited storage yard and/or manoeuvring space within the site. Anecdotally there are reports of staff parking on residential streets which would reflect this site:building ratio.

Figure 2.1 Extent of Greggs Bakery Site (red line boundary)

Source: Google Earth Pro (2016)

2.3 The site is predominantly surrounded by residential use, to the south, east and west, in the form of two storey terrace dwellings that are approximately 60 dwellings per hectare. The site's north western extent lies adjacent to 'Crane Mews', a regeneration scheme creating residential use with self-contained space for business as well. The northern boundary of the Bakery abuts the River Crane with the railway line beyond with the Mereway Cottages in between. The north eastern extent of the site is bound by adjacent industrial use and a three storey flatted residential development. The Twickenham Electricity Sub-Station can be found beyond.

2.4 The site has two vehicular access points: one is directly off Edwin Road at the south of the site and the second is located to the north-west of the site at the corner of Crane Road and Gould Road. Crane Road and Gould Road are residential streets with on road parking on two sides of the road. Edwin Road is a mixed residential street with access to other industrial units. It is also flanked by parked cars on both sides of the road and narrows with double yellow lines as it joins Colne Road. To the southernmost extent of the site, beyond Edwin Road, lies a small number of units with welders and automotive repair services.

2.5 The site's Edwin Road entrance is 264m from the A311 or 317m from the A305 while access onto the strategic A316 dual carriageway is over 2.2 km from the site's entrances. The A316 connects the M3 Motorway to central London. The site is located 6 km from the M3.

Planning Policy Context

The London Plan (2015)

2.6 The London Plan provides the overall strategic plan for London, setting out an integrated economic, environmental, transport and social framework for the development of London over the next 20-25 years. Boroughs' local planning documents have to be in general conformity with the London Plan.

2.7 Policy 2.7 of the London Plan, which addresses outer London, states that *"managing and improving the stock of industrial capacity to meet both strategic and local needs, including those of small and medium sized enterprises (SMEs), start-ups and businesses requiring more affordable workspace including flexible, hybrid office/industrial premises".*

2.8 Policy 4.4 of the London Plan requires the Boroughs at a strategic level to:

a *"adopt a rigorous approach to industrial land management to ensure a sufficient stock of land and premises to meet the future needs of different types of industrial and related uses in different parts of London, including for good quality and affordable space;*

b *plan, monitor and manage release of surplus industrial land where this is compatible with a) above, so that it can contribute to strategic and local planning objectives, especially those to provide more housing, and, in appropriate locations, to provide social infrastructure and to contribute to town centre renewal."*

2.9 The London Plan sets out nine matters to take account of in preparing Local Development Frameworks in order to demonstrate how the Boroughs will plan and manage industrial (and other land) in line with the strategic policies. These nine matters include:

a the need to identify and protect locally significant industrial sites where justified by evidence of demand;

b strategic and local criteria to manage these and other industrial sites;

c the borough level groupings for transfer of industrial land to other uses and strategic monitoring benchmarks for industrial land release in supplementary planning guidance;

d the need for strategic and local provision for waste management, transport facilities, logistics and wholesale markets within London and the wider city region; and to accommodate demand for workspace for small and medium sized enterprises and for new and emerging industrial sectors including the need to identify sufficient capacity for renewable energy generation;

e quality and fitness for purpose of sites;

f accessibility to the strategic road network and potential for transport of goods by rail and/or water transport;

g accessibility to the local workforce by public transport, walking and cycling;

h integrated strategic and local assessments of industrial demand to justify retention and inform release of industrial capacity in order to achieve efficient use of land;

i the potential for surplus industrial land to help meet strategic and local requirements for a mix of other uses such as housing and, in appropriate locations, to provide social infrastructure and to contribute to town centre renewal.

2.10 The London Plan identifies three types of location for industrial sites: strategic industrial locations; locally significant industrial sites; and other industrial sites. The supporting text to this London Plan policy requires that locally significant industrial sites must be designated on the basis of robust evidence demonstrating their particular importance for local industrial type functions to justify strategic recognition and protection (Paras 4.29 and 4.20).

2.11 The London Plan has identified a pan-London annual net release target of 37ha of industrial land use change between 2011-2031 with indication that the greatest scope for transfer being in the east and parts of inner west London, with more limited scope in north and outer west London and restricted scope for release elsewhere. In accordance with Map 4.1 of the London Plan, the Greggs Bakery site lies within an area identified for ‘Restricted’ release.

2.12 The supporting text goes on to state that the redevelopment of surplus industrial land should address strategic and local objectives particularly for housing and social infrastructure and that the release of surplus industrial land should, as far as possible, be focused around public transport nodes to enable higher density redevelopment, especially for housing. In locations within or on the edges of town centres, surplus industrial land could be released to support wider town centre objectives.

Local Planning Policy

2.13 The statutory development plan for LB Richmond comprises:

a The London Plan (2015)

b Core Strategy (Adopted 2009)

c Development Management Plan (Adopted 2011); and

d Parts of the Unitary Development Plan (Adopted 2005).

2.14 The Greggs Bakery site is not allocated for any use within the Saved UDP.

2.15 The current Core Strategy includes a local business policy (CP19) that seeks to support a diverse and strong local economy by retaining land in employment use for business, industrial or storage. CP19 also requires development which generates significant amounts of travel to be located in areas that are highly accessible to public transport, encourages the provision of small units and requires mixed use schemes to retain the level of existing employment floorspace. CP19 states that the inclusion of residential use within mixed use schemes will not be appropriate where it would be incompatible with established employment uses on neighbouring sites and prejudicial to their continued operation.

2.16 The Core Strategy does not identify any allocations. A Draft Site Allocations Plan DPD had previously been progressed which identified the site as a residential-led allocation to include start-up employment floorspace.

Pre-Publication Local Plan (2016)

2.17 The Pre-Publication version of the Local Plan has been published for public consultation to 19 August 2016. The draft Strategic Vision with regard to jobs and the economy states:

"The borough's local economy will be successful. Jobs will be readily available and there will be a choice of employment opportunities as the borough's Key Office Areas as well as the industrial land and business parks will have been protected from encroaching residential development. Employment space will have supported new business start-ups and enabled businesses to grow. There will continue to be a high proportion and variety of small local businesses, offering local jobs, and further opportunities for residents to set up their own enterprise." (Page 14).

2.18 The emerging Local Plan recognises that the business and industrial areas are historically dispersed across the borough and states that they all play an important role in providing business and employment opportunities for the community (Para 3.1.31). The Plan relies on the GLA's Employment Projections (2015) which estimate that the number of jobs in the Borough will total 105,000 by 2031 and 109,000 by 2036, an increase in 18,000 jobs between 2011 and 2031. The Plan uses this evidence to conclude that the borough will experience very strong demand for employment space.

2.19 Reported in the emerging Local Plan are the latest employment figures from the Business Register and Employment Survey which show that significant growth has taken place between 2012 and 2014, amounting to an additional 4,500 jobs. Therefore, the Local Plan's strategy seeks to protect and maintain this employment base, and enhance it through new provision to accommodate the expected job growth. The spatial strategy for the Local Plan highlights that the London Plan requires a 'restrictive' approach towards the transfer of industrial land to other uses and this should be adopted in the Borough. The Borough's view is that a cautious approach should be taken to releasing industrial land for other uses.

2.20 The emerging "New Policy LP 42" for industrial land and business parks reflects the spatial strategy and states that the borough has a very limited supply of industrial floorspace and demand for this type of land is high. Therefore, it says, the Council will protect, and where possible enhance, the existing stock of industrial premises to meet local needs.

2.21 Greggs Bakery is included within the Pre-Publication version of the Local Plan as "locally important industrial land" under emerging policy LP 42. The site which forms part of a proposed West Twickenham Cluster extends to 1.1 ha in addition to units to the south of Edwin Road. The proposed Cluster excludes the units to the east of Greggs Bakery but it is unclear why this is the case. The proposed policy states that in such areas:

a *"the loss of industrial floorspace will be resisted unless full, on-site replacement floorspace is provided;*

b *development of new industrial floorspace and improvement and expansion of existing premises is encouraged; and*

c *proposals for non-industrial uses will be resisted where the introduction of such uses would have an adverse impact on the continued operation of the existing services".*

2.22 This emerging policy is in contrast to a previous proposal for the site to be allocated for mixed use-development. The Borough Council previously identified the land as part of a wider potential allocation when, in late 2013, it sought comments on a draft Site Allocations Plan. This document sought to allocate the Greggs site and adjoining land known as the 'West Twickenham cluster, Twickenham' (TW11), a key employment site but with scope for a mix of uses to retain levels of employment for start-up /creative workshops and small scale business uses.

2.23 The emerging Local Plan also identifies a number of commercial sites that have been declared surplus to operational requirements and are being proposed for mixed use allocation to incorporate an element of residential use. These sites include a number of telephone exchanges and Royal Mail delivery offices in Hampton, Teddington, Whitton and East Sheen (Site Allocation references SA4, SA5, SA6, SA13 and SA26) all of which are located in heavily residential areas surrounded by high density terraced housing. They would appear to suffer from similar access and amenity constraints as the Greggs Bakery site.

2.24 Against the backdrop of an increasingly constrained and limited supply of land to accommodate employment (specifically industrial) uses in the Borough (explored in further detail below), the Council has failed through the new Local Plan to provide a robust evidence base and transparent rationale for allocating these and other sites for their respective uses.

Employment Land Evidence Base

2.25 LB Richmond has commissioned a number of technical studies relating to employment land needs in the Borough over the past few years to provide an evidence base for the emerging Local Plan, as follows:

1 2013 Employment Sites and Premises Study (prepared by Peter Brett Associates).

2 2016 Assessment of Light industrial and Storage Stock in Richmond upon Thames (prepared by LB Richmond).

2.26 The key findings and implications arising from these studies are summarised in turn below.

2013 Richmond Employment Sites and Premises Study (Peter Brett Associates)

2.27 LB Richmond commissioned an Employment Sites and Premises (ESP) study in 2013 to inform a review of the Council's economic policies in light of changing circumstances and events since the previous Employment Land Study was undertaken in 2009.

2.28 The study built an up to date picture of Richmond's employment sites and premises needs and provision, by area and sector, in order to support policy recommendations on the allocation, protection or release of employment sites. It includes a detailed assessment of the Borough's key employment sites and compared this with employment forecasts for the Borough based on long term projections and considered the implications this may have in terms of demand for employment land in the Borough.

What does the ESP study conclude about the balance of employment land demand and supply in LB Richmond?

2.29 The study assessed the long term demand for employment land over the plan period based on using the latest GLA employment projections available at the time of analysis, forecasts for office employment set out in the GLA's London Office Policy Review (2012) and also the GLA's forecasts from the Industrial and Warehousing Land Demand Study (2011).

2.30 At the time of study preparation, the latest available GLA Borough projections were those published in the 2009 Working Paper 39 in which the GLA used a triangulation forecast method to produce Borough level forecasts, bringing together trend based employment projections, site capacity projections and accessibility projections.

2.31 This triangulated forecast implied growth of 2,600 jobs over the 20 years 2011-31 in Richmond, representing a modest increase of 2.9%, or just 0.1% p.a. Although trend employment projections suggested that the Borough had very strong growth potential, these trend projections were constrained both by lack of capacity and by accessibility in the triangulation.

2.32 The triangulated employment forecasts showed that there are significant differences by sector with industrial sectors set to decline but also retail, finance and insurance sectors and public service sectors declining over this period. This outlook was broadly consistent with the baseline contextual analysis set out in the 2013 employment land study, i.e. that the property market analysis showed a continuing loss of industrial floorspace and an office market which remained attractive to occupiers even during the recession.

2.33 In terms of forecasting demand for industrial land in LB Richmond specifically, the ESP study drew upon the latest edition of the Industrial Release Benchmarks Study (published in 2011) which projected a small decline in the amount of industrial land for Richmond over the period 2011-31 of -1.8ha. Within this overall total there was anticipated to be a decline in demand for traditional industrial offset by an increased demand for warehouse uses and some waste activity (Figure 2.2).

Figure 2.2 **Net Demand for Industrial Land Richmond 2011-31**

Use	Hectares
Industrial	-18.5
Warehousing	13.1
Waste	3.6
Other	n/a
Total Demand	-1.8
Surplus Vacant Land	0.0
Net Demand	-1.8

Source: London Industrial Release Benchmarks Study

Source: Peter Brett Associates, Richmond Employment Land and Premises Study 2013

2.34 The GLA's Land for Industry and Transport Supplementary Planning Guidance (2012) revised the Borough industrial forecasts following a consultation of the Benchmark study. The industrial forecasts for Richmond were revised to a total loss of -4 ha which is equivalent to a loss of -0.2 ha per annum between 2011 and 2031.

2.35 The 2013 ESP therefore concluded that there was scope for LB Richmond's portfolio of industrial land to reduce in scale over the study period to 2031. It noted that in many cases this loss would be able to be recycled for other industrial uses but in some cases as industrial sites become redundant through firms moving out it may not be appropriate to recycle for industrial uses. The property market assessment showed that many of Richmond's industrial sites are constrained, often hemmed in by housing or requiring access via residential areas, thereby reducing their attractiveness to industrial occupiers.

What does the study say about market signals/trends?

2.36 The ESP study examined some key regional and local property market trends in order to understand demand and the location and type of demand for B-type uses in the Borough. An overview of the key findings from this assessment is provided in Chapter 3.0 of this report.

What are the study recommendations with regards to industrial uses?

2.37 In light of the decline in demand for industrial land identified as part of the study, the ESP study authors recommend that:

"All industrial land in the Borough is protected against the release of space to non-employment uses in line with policy EM2 of the Development Management Plan. The fundamental case for protecting this type of space lies at the borough-wide level: whether through cyclical shortage or structural under-representation, the stock of this space is small and fragmented. Even when not especially neighbourly, nor pleasing to the urban fabric, there is no real sign of vacancy other than in the most isolated pockets. In addition much of the space is currently used to service local economy and local residents." (para 9.14)

2.38 The study notes that larger industrial sites servicing a wider economy are very few and far between and as the buildings near the end of their functional life they will come under pressure for conversion. Many of the sites suffer from real accessibility constraints and for this reason are not likely to meet industrial occupier's future needs. Mixed use developments with an employment element should be supported on these sites and where possible, space to address the shortage of low-cost and simple "shed style" space that offers utility to a wide range of occupiers from transitional 'metal bashing' to new media companies.

What does the study conclude about the Greggs Bakery site?

2.39 A detailed site assessment of Richmond Borough's key sites was undertaken as part of the 2013 ESP. The Greggs Bakery site was one of 73 sites included within this assessment although the final study report does not provide detailed conclusions from this appraisal exercise for individual sites.

2.40 Despite lacking this justification, it notes that the Twickenham area gives the impression of being the "workshop" of the borough. It also suggests that many of the area's industrial buildings are old, coming to the end of their useful lives and there is likely to be pressure for redevelopment.

2.41 The Gregg's site is considered to dominate the supply of industrial space in Twickenham and is noted as being important. The employment land around it was noted to suffer from attritional loss to residential, and unless access can be improved to ameliorate impacts on residential areas, this was considered to potentially present a policy challenge.

Are the study assumptions robust, evidenced and transparent?

2.42 While the 2013 ESP follows a recognised methodology for assessing economic development needs that is broadly consistent with Government guidance, there are some aspects of its approach that make its forecasts of future employment land needs in the Borough less robust. These are set out in turn below.

Transparency of site assessment process

2.43 As part of the 2013 ESP, the final report stated that a detailed site assessment was undertaken of the Borough's key sites, with a total of 73 sites visited and individually assessed. These site assessments were noted to have followed a standardised assessment template customised to the needs of the study. The aim of this was to give a brief, easy to grasp but comprehensive assessment of each site in a structured manner to enable both comparison between sites and generalisation for sub-markets.

2.44 A summary of the findings of the site assessments is presented in Chapter 6 of the ESP study ('The Local Property Market Assessment') broken down by local property markets (one of which comprises Twickenham). For the Greggs Bakery site, the commentary notes that *"the site rather dominates attention, and is obviously important" and that "the employment land around it is suffering from attritional loss to residential, and unless access can be improved to ameliorate impacts on residential areas, this could present a policy challenge."*

2.45 No further detail is provided in the ESP final report of the key findings and conclusions from the site assessment, and it is therefore difficult to validate or consider the basis and rationale upon which the above commentary is made. The lack of transparency associated with this approach does not meet the London Plan requirement for locally significant industrial sites to be designated on the basis of robust evidence demonstrating their particular importance for local industrial type functions to justify strategic recognition and protection.

Scenario development

2.46 The GLA's triangulated employment forecasts and its component forecasts provide the foundations for the long term demand projections for LB Richmond within the 2013 ESP. For office uses, long run forecasts for the Borough were taken from the London Office Policy Review (LOPR) 2012 edition. For forecasts of demand for industrial land, the study used the latest edition of the Industrial Release Benchmarks Study (published in 2011) which informed the 2012 Industrial Land SPG.

2.47 The study failed to sensitivity test these demand assumptions with more locally gathered feedback and market intelligence to test whether the scale and nature of job growth and demand for land implied by the 2012 LOPR and 2011 Industrial Release Benchmarks Study still remained reasonable at the time of preparation.

2.48 It also failed to consider any alternative approaches to estimating future demand for employment land in LB Richmond beyond purely labour demand.

When assessing future economic development needs, Government guidance recommends testing a range of approaches including analyses based on the past take-up of employment land and property which would allow a consideration of past trends in completions of employment space in the Borough and how these trends might change in the future.

2.49 Another recommended approach is undertaking demographically derived assessments of future employment needs (i.e. labour supply techniques) to consider the scale and nature of future supply of labour that may be available to take-up employment opportunities in the Borough. The 2013 ESP does not consider either of these approaches as part of its quantitative assessment of demand for employment land over the plan period to 2031.

2.50 Finally, whilst the ESP study presents the net requirement for B class space associated with the demand outputs from the LOPR and Industrial Release Benchmarks Study, it failed to convert these to gross requirements for employment space (i.e. the amount of employment space or land to be allocated/planned for) which typically involves making an allowance for some replacement of losses of existing employment space that may be developed for other, non B Class uses as well as a 'safety margin' to reflect the period of bringing forward a site for development.

2.51 The study acknowledged the difference between net demand and gross take-up for the purposes of planning, but did not quantify this additional required provision in space or land terms. It is therefore impossible to know exactly how much land for industrial and office uses should be planned for in LB Richmond over the plan period.

Industrial market signals

2.52 Although the 2013 ESP study provided a description of regional and local property market trends at various points in the final report, the majority of this intelligence focused upon office uses, which is noted to be the main type of employment space demanded in LB Richmond.

2.53 In contrast, very little commentary and intelligence is provided for the industrial property market in and around the Borough (indeed this is referred to as "non-office employment space") making it difficult to be able to compare quantitative demand forecasts and requirements with more qualitative feedback on market signals, needs and gaps. Government guidance states that plan makers should consider forecasts of both quantitative and qualitative need and also its particular characteristics (such as the footprint of economic uses and proximity to infrastructure), yet the 2013 ESP study provided insufficient qualitative evidence to be able to accurately and robustly conclude on the most appropriate approaches to meeting industrial needs in LB Richmond over the plan period.

2016 Assessment of Light Industrial and Storage Stock (LB Richmond)

2.54 This report was prepared by LB Richmond's Local Plan Team in June 2016 within the context of recent Government policy to provide greater flexibility for change to alternative uses without requiring planning permission as part of its agenda to free up the planning system in order to provide more homes.

2.55 In order to help inform the Council's future strategy and response to these changes, an assessment was undertaken of the Borough's Business Parks and Industrial Estates in order to assess the quality of industrial and warehousing stock. This concluded with a series of recommendations as to whether B8 and B1c /B2 stock should be protected, primarily because of the scale and quality of the stock. It was considered by the report that protection of core industrial uses, i.e. general industry, light industry, warehouses, open storage and self-storage could be achieved through identifying the industrial sites within the Local Plan and preventing inappropriate change of use on these designated sites through the implementation of strict policies to protect and enhance the existing employment land.

2.56 The Greggs Bakery site was included within the 'West Twickenham Cluster' for the purposes of assessment and this cluster was recommended for designation as a 'Locally Important Industrial Land and Business Park' in the emerging Local Plan. The Council acknowledge within their own quality assessment that the 'West Twickenham Cluster' is one of the poorer performing sites in the Borough, scoring within the bottom 20% in terms of 'quality'. Within their 2016 report, the Council note that in terms of the condition of the building, *"generally, those properties defined as "good" or "high" quality were considered as worthy of protection as were modern buildings and good quality period properties."* The condition of buildings in the West Twickenham Cluster' are described as 'fair', inferring that they are not necessarily worthy of protection.

2.57 The 2016 assessment also noted that the GLA's recently published Industrial Land Supply and Economy Study (2015) (described below) demonstrates that Richmond borough has a very limited supply of industrial land which is amongst the lowest of all the London boroughs. Given that the borough's 'restrictive transfer' approach is unlikely to change within the next London Plan, it was considered that locally important industrial estates and business parks should be specifically listed in a new policy and given enhanced protection.

2.58 In the locally important industrial land and business parks, it is noted that loss of industrial space will be strongly resisted unless full replacement provision is provided, which should be on-site. New industrial, storage and distribution development, as well as improvement and expansion of such premises, is encouraged in these areas, particularly new B2, B8 or B1(c) floor space, subject to other policies in the Plan. Proposals for non-industrial uses will be resisted unless the proposed uses are ancillary to the principal industrial use on the site.

2015 London Industrial Land Supply & Economy Study (AECOM)

2.59 This study prepared on behalf of the Greater London Authority (and published in March 2016) assessed the supply of industrial land in London in 2015. It looked at how much industrial land had been released over the period 2010-2015 as well as potential future release of land in the planning pipeline. It provided an up-to-date picture of LB Richmond's industrial land supply and overview of how this stock of space has changed over recent years. Key points for LB Richmond include:

- The Borough recorded one of the lowest rates of industrial land vacancy within London (with industrial vacancy standing at around 1.8% in 2015, compared with 4.1% in the South sub-region[1] and 7.8% across London as a whole).
- The actual rate of industrial land release (between 2010 and 2015) exceeded the GLA's Land for Industry and Transport SPG benchmark rates of release by nearly 800% (8.8ha released over the 5 year period 2010-2015 compared with a benchmark of 1ha). This means that industrial land has been released to other uses in the Borough at a higher rate than recommended by the GLA across this period.
- Average rental values for industrial premises in the Borough increased by 10.9% over the five years 2010 to 2015, falling behind the rate of increase across the wider Park Royal/A40/Heathrow area (14.9%) and also the 13.2% recorded across London as a whole.
- The ratio between residential and industrial land values in 2015 in LB Richmond at 7.8 is higher than the wider Park Royal/A40/Heathrow (2.6) and London (3.2) averages. This relative gap places substantial pressure on industrial land from higher values uses, most notably residential.

Conclusions

2.60 The Greggs Bakery site is located within a predominantly residential area and is heavily constrained by this context. The site has never previously been allocated for employment or industrial uses, and has therefore never previously been considered amongst the Borough's most important sites for employment uses and in need of protection for such uses.

2.61 Having previously proposed to allocate the Bakery site back in 2013 for mixed use development that retained an element of employment use on the site, LB Richmond now proposes through its Pre-Publication Local Plan (2016) to designate the site as locally important industrial land. The rationale for this proposed allocation is unclear but would appear to be driven by the London Plan's 'restricted' transfer category for LB Richmond, and also by recent industrial supply side analysis undertaken by the Council in 2016 (drawing upon industrial market indicators presented within the 2015 London Industrial

[1] Comprising the London Boroughs of Bromley, Croydon, Kingston upon Thames, Merton, Richmond upon Thames, Sutton and Wandsworth

Land Supply & Economy Study) which points to the Borough having recorded continual losses of industrial space over recent years. We understand the Borough's policy drivers but do not agree with the particular approach taken to the Bakery site.

2.62 Crucially, this proposed allocation does not appear to take account of up-to-date demand side factors, evidence and projections of industrial space needs in the Borough. LB Richmond's employment land evidence base is considered to be out-of-date; the most recent comprehensive objective assessment of employment land demand and supply (LB Richmond ESP study) was undertaken in 2013 and did not recommend that the Greggs Bakery site should be specifically allocated for employment use. It was also prepared to inform the Council's previous draft Site Allocations Plan in 2013 which has since been superseded by the ongoing Local Plan Review. Subsequent employment evidence base studies have sought to update this evidence in a piecemeal and fragmented way, and as such the Council has failed to provide a robust and transparent logic chain to justify the allocation now being proposed. This lack of evidence base and logic chain fails to meet the London Plan requirement for locally significant industrial sites to be designated on the basis of robust evidence demonstrating their particular importance for local industrial type functions to justify strategic recognition and protection.

2.63 The 2013 ESP study acknowledged that in some cases, as industrial sites become redundant through firms moving out it may not be appropriate to recycle for industrial uses, particularly in those instances where industrial sites are constrained, hemmed in by housing or requiring access via residential areas, thereby reducing their attractiveness to some industrial occupiers. Mixed use developments with an employment element were recommended to be supported on these sites. The Greggs Bakery buildings are nearing the end of their functional life and fit within this category of constrained industrial sites. This conclusion is also supported by the Council's own assessment of industrial sites prepared earlier in 2016 which described the site as being of 'fair' quality and therefore one of the poorest scoring sites in the Borough.

2.64 Within this context, the proposed allocation of the site as locally important industrial land would appear to contradict the Council's evidence on the intrinsic quality and suitability characteristics of the Greggs Bakery site and its potential for supporting industrial activity over the longer term.

2.65 The Government's Planning Practice Guidance (PPG) says that authorities should *"develop an idea of future needs based on a range of data which is current and robust*" and *"consider forecasts of quantitative and qualitative need…broken down by economic sectors",* together with the particular characteristics of employment land in the area. Based on the above review, it is considered that the Council's evidence base is deficient in terms of presenting a PPG compliant objective assessment of employment land needs for the Borough and in justifying the need to allocate and/or retain all industrial land. There is no clear evidence on the need to allocate the Greggs Bakery site for employment purposes over the Plan period.

2.66 We do not consider the proposed approach to be justified, effective or consistent with national policy. In short, we do not consider the rationale for designation of this site as locally important industrial land to be sound.

3.0 Commercial Property Market Signals

3.1 This section provides an overview of the current stock of employment (specifically industrial) space in LB Richmond and recent trends and changes to the supply of this space. It then describes current property market conditions in the local and wider South West London area, including recent trends in the demand for and supply of industrial premises. This analysis is based on data from the following sources:

- Commercial floorspace data from the Valuation Office Agency (VOA);
- LB Richmond's monitoring data on commercial space;
- Feedback provided by local commercial property agents; and
- EGi Property Link database and other commercial property sources.

Stock of Employment Space

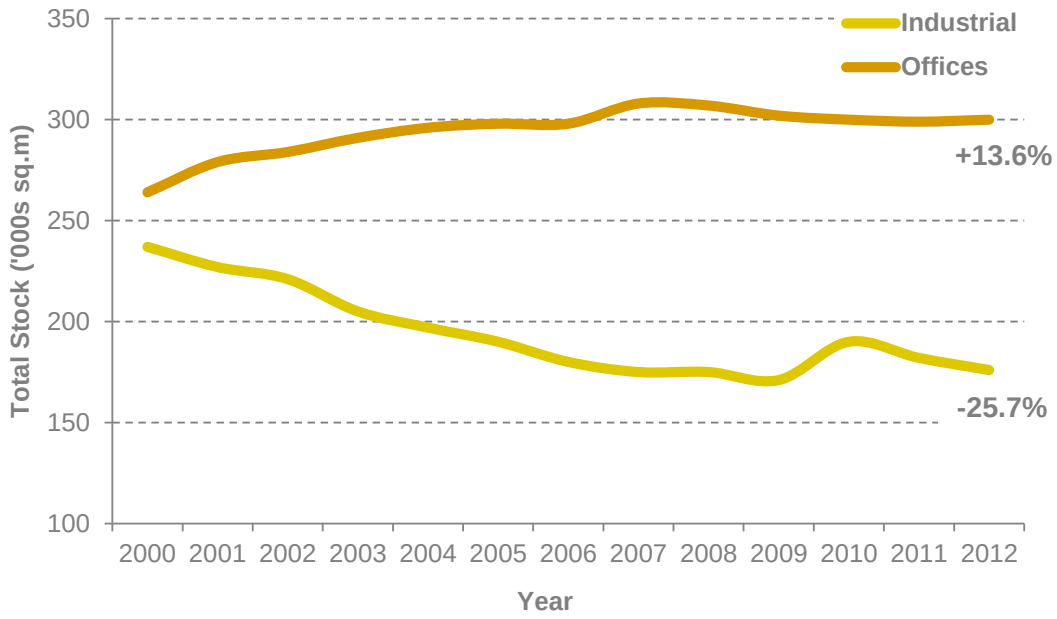
3.2 LB Richmond contained some 476,000sq.m of B class floorspace in 2012, the majority (63% or 300,000sq.m) of which related to office (B1a/b) uses.

3.3 The stock of industrial (i.e. manufacturing and warehousing) space in LB Richmond declined by 61,000q.m or 25.7% over the 12 year period 2000-2012 according to published VOA data (Figure 3.1). This rate of decline was slightly higher than the London-wide average of 19.1% over this period, and also higher than the national (England) average of 3%. This 61,000sq.m of industrial floorspace losses in LB Richmond represented just under 5% of all industrial floorspace that was lost within the outer London Boroughs between 2000 and 2012.

3.4 In contrast, the Borough's office space has gradually increased in overall terms in recent years, by 36,000sq.m or 13.6% between 2000 and 2012 (Figure 3.1). This rate of increase is slightly higher than the London average (12.1%) and significantly higher than across the outer London Boroughs which recorded a 1.2% reduction in office floorspace over this 12 year period.

3.5 It should be noted that the period of analysis presented above pre-dates the introduction of Permitted Development Rights (PDR) in May 2013 to allow for change of use of office space to residential without the need to obtain formal planning permission. LB Richmond notes within its Pre-Publication Local Plan (2016) that the loss of employment space due to PDR is a major concern with 234 Prior Approvals having been approved between May 2013 and February 2016. If implemented in full, these approvals would result in a potential loss of 81,978sq.m of office floorspace.

Figure 3.1 Change in Total Stock of Employment Floorspace in LB Richmond, 2000-2012



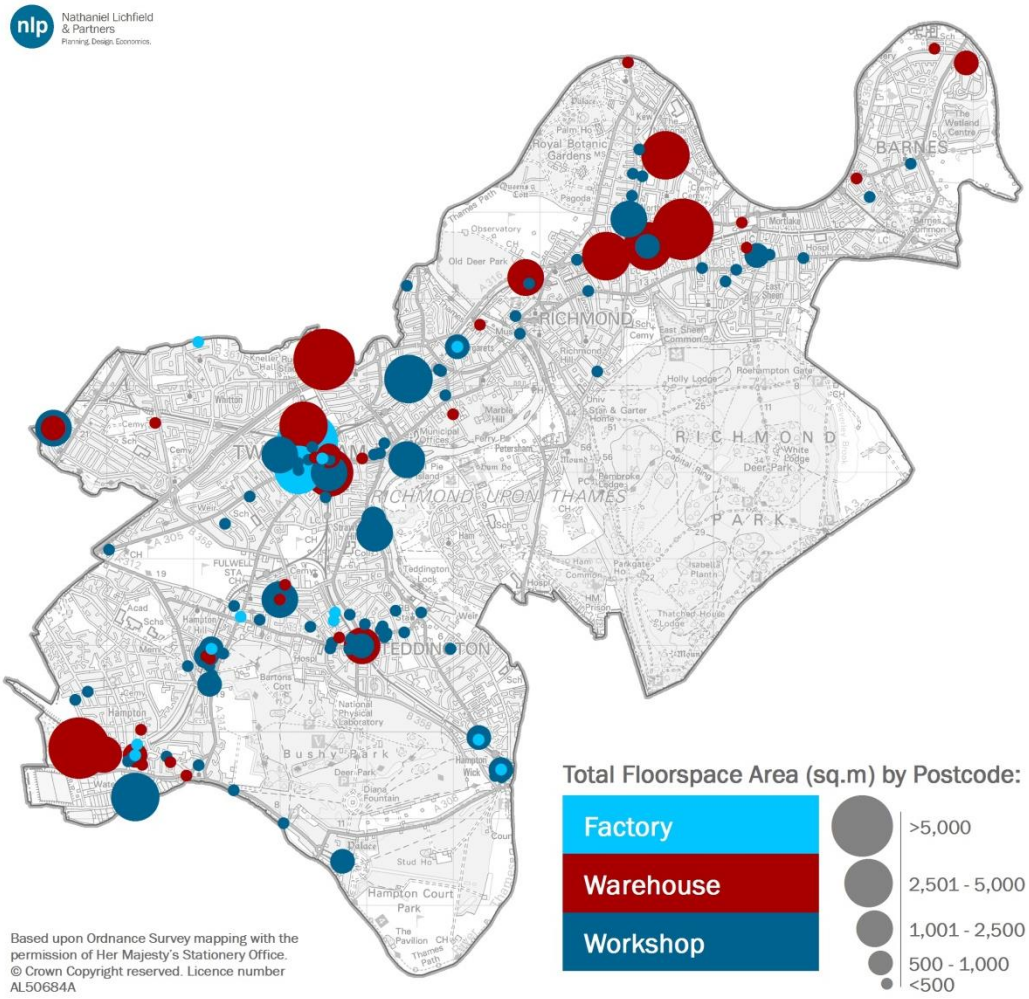
Source: VOA Business Floorspace Statistics 2012 / NLP analysis

Spatial Distribution

3.6 Figure 3.2 shows the distribution of floorspace by broad industrial category across LB Richmond using latest available VOA data. This illustrates the role that the areas of Twickenham, Richmond Town and to a lesser extent Hampton and Teddington play in accommodating the Borough's stock of industrial space. Whilst all of these areas have a stock of workshop and warehousing space (of varying sizes and scales), Twickenham stands out as accommodating the most sizeable cluster of factory space in the Borough, with the stock of factory space elsewhere in the Borough much lower and less significant by comparison.

3.7 This mapping analysis also underlines the importance of the A316/Chertsey Road corridor in influencing the distribution of industrial floorspace in LB Richmond, with the majority of industrial space located in close proximity to this route which traverses the Borough in an east-west direction. Further away from this corridor, clusters of industrial space tend to be dispersed more unevenly in and around Teddington and Hampton to the south and west of the Borough, and also tend to be smaller in scale as illustrated by Figure 3.2.

Figure 3.2 Spatial Distribution of Industrial Floorspace in LB Richmond

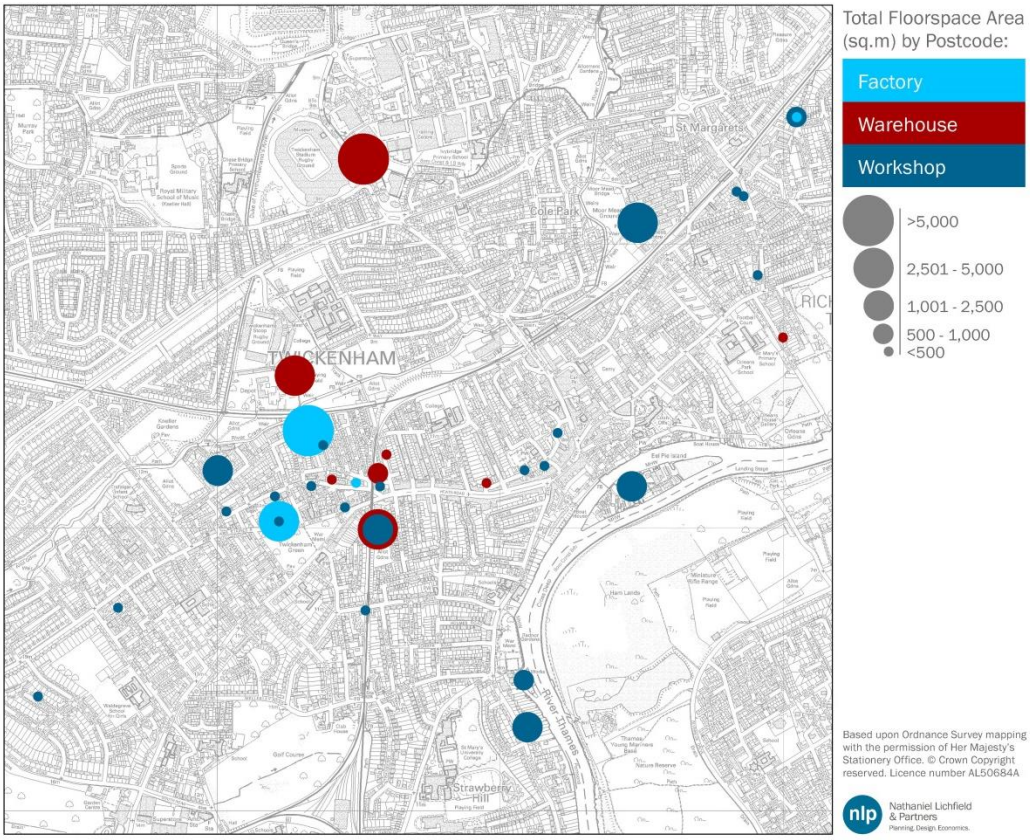


Source: VOA 2010 / NLP analysis

3.8 A more detailed analysis of VOA industrial floorspace recorded in the Twickenham area of the Borough is shown in Figure 3.3. This shows that industrial space is scattered across the local area, but with a notable cluster to the west of Twickenham town centre. There are also sizeable industrial premises located to the north of the Twickenham railway line, and also some smaller units alongside the River Thames.

3.9 The Greggs bakery site (recorded by the VOA in 2010 as accommodating around 7,230sq.m of factory space) represents one of the largest industrial premises in the Borough, with only two other premises being larger in scale (comprising a 9,100sq.m warehouse on Lower Richmond Road in Richmond and a 10,630.sqm warehouse on Rugby Road in Twickenham).

Figure 3.3 Spatial Distribution of Industrial Floorspace in Twickenham



Source: VOA 2010 / NLP analysis

Local Property Market Characteristics

Industrial Business Base

3.10 Data analysis undertaken as part of the 2013 ESP Study shows that around 47% of businesses in Richmond Borough operate in B-space occupying sectors. The majority of these B-space businesses are located in the core centres of Teddington, Twickenham, Richmond Town Centre and Fringe area and in the East Sheen & Barnes area. Whilst there are generally few industrial and warehousing employers in the Borough, the largest concentrations of these businesses can be found in Twickenham, Richmond Fringe, Teddington and Hampton.

3.11 Data analysis also shows that the majority of the industrial and warehousing business in the Borough are micro businesses servicing the local economy e.g. auto repair stations; storage; repair workshops and small scale production and are scattered around the Borough.

3.12 Industrial sectors in LB Richmond have continued to decline in the recent past with some growth in working proprietors in construction and manufacturing sectors. As a result Richmond has a relatively small industrial and warehousing business base.

Industrial Property

3.13 Property market analysis contained within the 2013 ESP Study shows that the majority of activity within LB Richmond has historically been in the office market and office development continues to represent the main type of employment space demanded in LB Richmond.

3.14 Despite the Borough's close proximity to Heathrow, there is a noticeable shortage of utility style space rooted in the shed/ industrial market. West London's shed market is clustered much nearer Heathrow, and this shows up in a marked absence of distribution activity in Richmond. There is very little industrial space that is modern, apart from one scheme in Hampton - Kempton Gate - which is noted by the study as having good quality space and serves more of a local or sub-regional distribution hub than "big sheds".

3.15 Industrial premises, whether of good quality or not, are thinly scattered around the Borough. Further, that which is present is often hemmed in by housing, or requires access via residential areas and this presents a real challenge in planning terms. Marginal activities are an important part of this local offer and supply is rather limited, at least in part due to a relative shortage of railway arches and similar "backland" space.

3.16 Demand for industrial space in the wider South West London market is reported by local and regional property agents to be strong, with the majority of enquiries tending to fall within the 5,000sq.ft-10,000sq.ft size bracket and generally coming from delivery/logistics firms who also require car parking space within the site. The supply of industrial space is reported to be limited across all size brackets and across the whole of South West London.

Role of Twickenham as a Business Location

3.17 Twickenham is described by the 2013 ESP Study as a secondary centre and somewhat struggling in comparison to Richmond Borough standards. Squeezed between Richmond and Teddington, Twickenham is historically seen as an overspill centre for Richmond accommodating those unwilling to pay Richmond prices, or unable to find sufficient space.

3.18 Much of the recent industrial market activity has been driven by occupiers being pushed out of more central London locations such as Battersea and Wandsworth but still wanting to retain their workforce and customer base. Twickenham tends to operate within the A316 (and to a lesser extent A3) broad property market corridor in this respect, facilitating this flow of occupiers and linking Twickenham with strategic routes such as the M3 and M25.

3.19 As noted previously, Twickenham is considered by the study to be the "workshop" of the Borough with the Greggs Bakery site dominating attention. Meanwhile, the employment land surrounding it is suffering from attritional loss to residential, and unless access can be improved to ameliorate impacts on residential areas, this was identified by the 2013 ESP Study as presenting a key challenge going forward.

3.20 The need for regeneration in Twickenham has been recognised by the Council and an Area Action Plan (AAP) has been produced which identifies five key opportunity areas. The AAP proposes new employment floor space as part of mixed use development schemes and the retention and enhancement of existing employment uses to meet modern day needs. It should be noted that the Greggs Bakery site lies outside of the Twickenham AAP defined area.

Market Signals

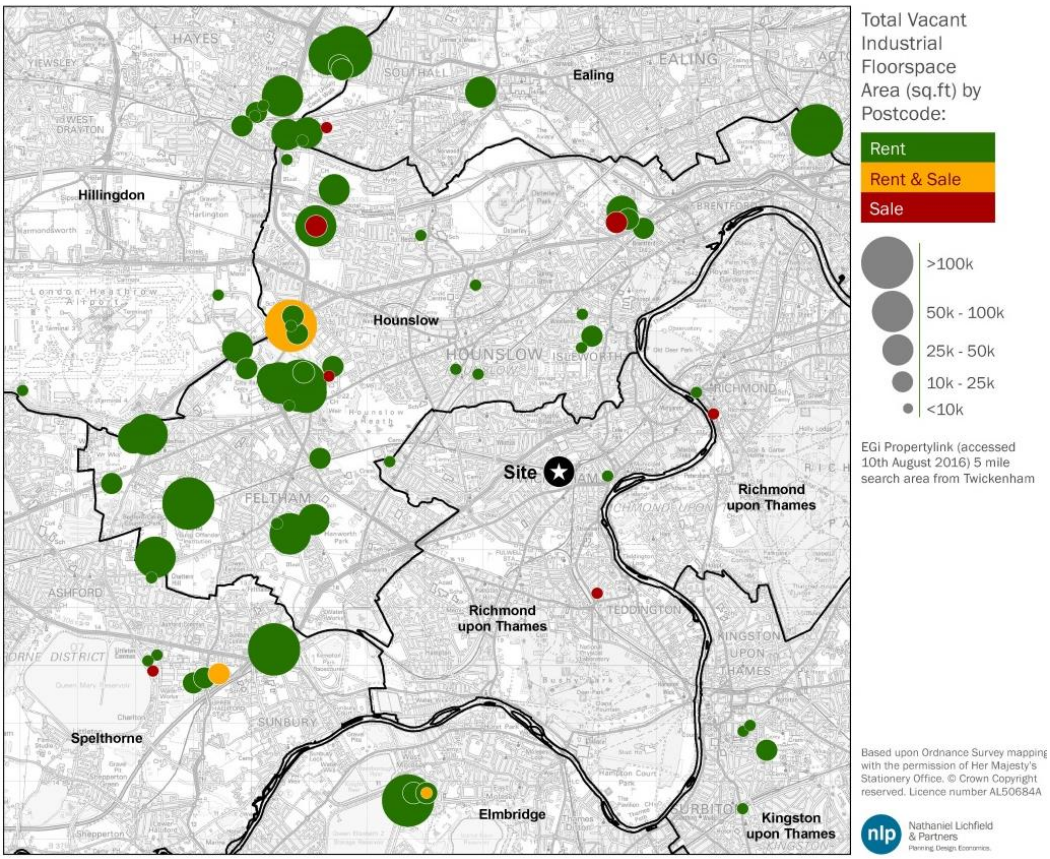
3.21 In line with the provisions of the PPG, it is useful to consider market signals in order to understand local market conditions for industrial space of the type and nature of that accommodated on the Greggs Bakery site.

Vacancy

3.22 Based upon a search of the EGi Propertylink database in August 2016, there are currently 130 industrial properties available to rent, for sale or both within a five mile radius from Twickenham. Of the 130 properties, 118 are for rent, 8 are for sale and 4 are for either rent or for sale.

3.23 Figure 3.4 illustrates the spatial extent of the available properties and the size of those units. Where the units are available in a range of sizes with the ability to subdivide into smaller units, the map illustrates the maximum floorspace available in that group of units.

Figure 3.4 Available Industrial Properties (5 mile radius from Twickenham)



Source: EGi Propertylink (at August 2016)

3.24 The map highlights that there are few industrial properties currently available for rent or sale within LB Richmond. The greatest concentration, scale and options for industrial units within five miles of Twickenham are in the adjacent London Borough of Hounslow, partly reflecting its proximity to the M3 and M4 motorways and Heathrow Airport.

3.25 EGi Propertylink shows that these properties range from 650sq.ft in Spring Grove Road to 200,000sq.ft at the Vantage design and build scheme in Hounslow. The vacant properties range in age and flexibility to meet modern needs.

3.26 This vacancy analysis underlines the relatively limited scale of market churn, activity, and opportunities within LB Richmond's industrial market and helps to substantiate previous feedback (including that presented within the 2013 ESP Study) about the declining role of the Borough as an industrial location. In contrast, industrial markets in adjoining areas such as Hounslow, Heathrow and Park Royal are much larger in scale and characterised by comparatively more activity and occupier demand (as well as land availability). LB Richmond is becoming increasingly unable to compete with these larger markets for occupiers and investment.

Development Rates

3.27 There is no published annual reported information on the gains and losses of employment floorspace for 2014/2015. The Borough's latest available Annual Monitoring Report (AMR) data for 'employment' was published in December 2014 and covers the financial year 2013/14. However, this only considers the gains and losses of office floorspace.

3.28 The most recently available AMR that does include information on industrial floorspace is dated December 2013 and considers the financial year 2012/2013. Annual Indicator 65 for 2012/2013 states that there was a net loss of 13,829sq.m of employment floorspace. Of this, 84sq.m involved the gain of B2 (industrial) floorspace and 1,017sq.m of industrial floorspace was lost to other uses, resulting in an overall net change for that year of -933sq.m. This is broken down by site in Table 3.1.

Table 3.1 Gains and Losses of B2 Employment Floorspace in 2012/2013

	From (Use Class)	To (Use Class)	Gains (sq.m)	Losses (sq.m)	Notes
8 Nelson Road, Twickenham	B8	B2	84		Builders yard to car repairs
Lion Boathouse (ground Floor) Eel Pie Island, Twickenham	B2	C3		65	
14a King Street, & Retreat Road, Richmond	B2			712	Demolition of redundant print works
127 Colne Road, Twickenham	B2	D1		240	
Total			**84**	**1,017**	
Net change (All B)				**- 933sq.m**	

Source: LB Richmond AMR 2012/2013

3.29 Looking at preceding AMR's dating back to 2007/2008 (before which an alternative method to reporting floorspace had been used), there has been a total loss of gross external industrial floorspace of 1,957sq.m in net terms across the Borough. Table 3.2 presents this data on a year by year basis.

3.30 This total floorspace loss figure is equivalent to around 325sq.m per annum on average over the monitoring period. This compares with headline VOA floorspace data (presented in Figure 3.1 above) which indicates that LB Richmond has been losing approximately 200sq.m of industrial floorspace per year on average in net terms between 2007 and 2012.

3.31 It should be noted that although LB Richmond's 2016 Assessment of Light Industrial and Storage Stock provided an overview of industrial land release in the Borough in broad terms, it did not provide any further detail of industrial floorspace gains and losses on a site-by-site basis.

Table 3.2 Annual Change in gross external industrial floorspace in LB Richmond, 2007-13

AMR Reporting Year	Net change (sq.m)
2012/2013	-933
2011/2012	-2,039
2010/2011	-4
2009/2010	-485
2008/2009	-109
2007/2008	1,613
Total (2007-13)	**-1,957**

Source: LB Richmond Annual Monitoring Reports (2007-13)

3.32 This pattern of gradual erosion of industrial floorspace is not unique to LB Richmond. The majority of London Boroughs have recorded a similar pattern of erosion as economic activity shifts away from manufacturing and production towards services and consumption related activity.

Conclusions

3.33 Industrial space in LB Richmond is concentrated within a number of key commercial centres including Twickenham, and is generally clustered along the Chertsey Road corridor. Greggs Bakery represents one of the largest industrial premises in the Borough, with other industrial premises generally being smaller in scale.

3.34 Many of the Borough's industrial sites are found in unsuitable locations, with increasing pressure from incompatible uses (most notably residential) providing a key challenge to continued viability and attractiveness for industrial occupiers. These amenity issues pose a problem in Twickenham (as noted by the 2013 ESP Study and Twickenham AAP) and for the Greggs Bakery site in particular.

3.35 Office uses represent the key driver of LB Richmond's commercial property market, while the Borough's stock of industrial space has been gradually declining over recent years and this trend is echoed across the majority of London Boroughs. The Borough's proximity to a number of larger, more established industrial centres (such as Hounslow and Heathrow) coupled with its eroding industrial stock makes it increasingly unable to successfully compete for occupiers and investment.

3.36 An analysis of industrial space vacancy in LB Richmond reflects the relatively limited scale of market churn, activity, and available opportunities within the Borough's industrial market and underlines the secondary role that the Borough plays as an industrial location, particularly when compared with other more established industrial centres within the adjoining areas of Hounslow, Park Royal and Heathrow.

4.0 Site Characteristics and Challenges

4.1 This section considers some of the qualitative challenges faced by the Greggs Bakery site and how these are likely to influence the ability of the site to accommodate industrial uses over the longer term. It concludes by examining how well emerging Local Planning policy is aligned with this more qualitative evidence on the potential role of the site in future.

Qualitative Assessment

4.2 In undertaking a qualitative assessment of the Greggs Bakery site, it is evident that there are significant physical and amenity constraints which are likely to prevent continued or transformed industrial operations.

4.3 The inverse 'L' shaped site extends to 1.1 ha and is nearly 190m long and typically 45m wide. At its northern extent the site extends to approximately 85m wide. It is generally level. From our desktop analysis, there do not appear to be any nature conservation, arboricultural, or sensitive landscape constraints affecting the site. The boundary constraints of the site mean that there is no room for expansion of the existing bakery facility to allow for future business growth.

4.4 There are two conservation areas in close proximity to the site: Hamilton Road (LPA ref no. 72) and Twickenham Green (LPA ref no. 9). The Hamilton Road conservation area extends to Warwick Road, the electricity sub-station to the north and parts of Edwin Road and is 45 m east of the site. Edwin Road forms one of the two entrances into the Greggs Bakery site. Twickenham Green conservation area is located over 100m to the south of the site. Although the Greggs Bakery site does not fall within either of these two conservation areas, its proximity to them is likely to influence the nature of any future redevelopment on the site.

4.5 As set out in the site context section of this report, Greggs Bakery is located within a predominantly residential area. There are adjoining residential properties on two thirds of the site's perimeter boundaries. This proportion rises to three quarters if the Mereway Cottages immediately across the River Crane are included. The residential area is densely developed with terrace housing at approximately 60 dwelling per hectare and therefore a number of properties are directly and indirectly affected by the current operations of the manufacturing site.

4.6 NLP understands that the site benefits from an unrestricted planning permission which allows the use of the site for 24 hour operations, with no restrictions on access, servicing, noise or emissions. Notwithstanding the clear inadequacies of the buildings themselves which are set out in detail below, future occupiers operating within the existing units could continue to undertake use class B2 industrial operations without further recourse to the local planning authority.

4.7 The current operations are bakery related manufacturing. However, within the existing unrestricted planning permission, the full range of B2 uses could include other heavier industrial manufacturing processes, production of building materials, waste processing and garage repairs and vehicle testing which all are likely to create significant adverse impacts for the local residential neighbourhood.

4.8 While environment regulations may be in place for some operations, e.g. through waste permits, we are aware of many examples where such controls are not effective and there are continued adverse impacts upon the local communities. Should robust environmental controls be possible through permitting by the Environment Agency, many potential occupiers of the units will be constrained by the extent to which they will have to mitigate any light, odour, noise, vibration or dust pollution as governed by Environmental Health legislation. This could result in the premises being untenable for those uses given the proximity of the residential neighbours and is likely to restrict the types of B2 users that would ultimately consider the site to be viable for their operations. It should also be noted that any such mitigation measures would arguably be harder to enforce should the site be redeveloped to accommodate multiple occupiers (as opposed to the existing single occupier), with greater scope for amenity issues created by multiple industrial users or onerous conditions attached to planning permissions which restrict use by most Class B2 and B8 uses.

4.9 Where pollution outputs created by the occupier could be controlled through the relevant legislation and/or permitting, there are other factors which do not have any existing controls. These include: volume and type of large vehicle movement through the residential streets or the times of day that they are permitted to move and the on-street waiting of the goods vehicles due to limited space within the site to accommodate them. A transport report recently prepared by JMP, which is submitted alongside these representations, concludes that the surrounding roads are not of a sufficient size to accommodate the HGV's associated with industrial use.

4.10 Vehicular access to serve the industrial unit is poor. Access to the Bakery is via residential streets with cars narrowing the road for larger vehicles. There is no turning area outside the site for lorries and the service yard is small and significantly constrained. The strategic road network lies 2.2 km to the A316 dual carriageway and 6 km from the M3. Heathrow Airport is located approximately 8 km from the site. While pedestrian access is reasonable through residential streets, the public transport accessibility score is only PTAL 2. However, there are two bus stops within 404-452 m providing frequent services to Twickenham Green which takes between 12 and 18 minutes for the full journey. Complaints have been reported from local residents regarding cars that have been damaged from the vehicles visiting the industrial unit.

4.11 Greggs Bakery has previously advised LB Richmond of the substandard quality of the bakery buildings, including evidence of asbestos within the buildings. The age and quality of premises mean that there are on-going and

unsustainable costs of maintaining the buildings for Greggs Bakery or any business which sought to occupy the existing units.

4.12 Existing development on the site is of a very high density and this limits the scope and scale of industrial activities that could realistically be supported on the site. As noted previously, local and strategic road access is poor and on-site car parking is very constrained with operations significantly impacted by controlled parking measures in the area surrounding the site. The type, scale and location of the industrial premises is not considered to be reflective of current industrial market demand in and around LB Richmond and the majority of potential occupiers would be forced to make significant compromises in order to continue industrial operations on the site in future.

4.13 A combination of these maintenance costs, problems with the building fabric and physical constraints of the site led Greggs to a decision to search for alternative premises in the late 1990s. Having been unable to identify a suitable replacement site in the local area, the bakery facility is now planned to be relocated to Enfield over the next year, resulting in the loss of a major employer.

4.14 From a market perspective, the units are not flexible or suitable for modern industrial operations. The 2013 ESP Study also noted that many of the Borough's industrial sites and premises are reaching the end of their working lives, are of a poor quality and are no longer considered to be fit for purposes in terms of meeting business needs. Indeed, the Borough will struggle to maintain its industrial economy if space of the right type/quality and in the right location is not available.

4.15 Colliers has previously reported to LB Richmond that Greggs Bakery has struggled to operate the site in a satisfactory manner since it was acquired in 1994. Greggs Bakery has experienced difficulties in managing the relationship with the community and tensions continue despite exhaustive attempts by the Company to alleviate amenity concerns. It is considered that the amenity impacts are a function of industrial premises being located within a constrained site with poor accessibility for large vehicles.

4.16 There are a significant number of indicators from this assessment that show that the existing site is not fit for its industrial purpose and is heavily constrained by its shape, location, proximity to its residential neighbours, vehicular access and lack of room for expansion. Further, the buildings are aged, in poor condition and require burdensome ongoing maintenance costs. It is considered that the buildings are no longer reasonably suitable for alternative tenants and the site is not suitable for uncontrolled industrial uses. Any controlled industrial uses are likely to need significant and extensive mitigation controls in place to reduce any impacts to an acceptable level. These controls may render alternative industrial uses unviable given the context of the site.

4.17 As Greggs no longer require the Bakery site and the buildings have come to the end of their useful life, the question is whether any firm would redevelop it

for industrial uses. This should be explored further but we expect such redevelopment schemes would be heavily constrained.

An Alternative Employment Use

4.18 Whilst it is recognised that the long term industrial operation of the site is unacceptable from both a business and community perspective, Greggs are committed to securing the best long-term use for the site and are of the opinion that it could contribute to continued employment generation through a mixed-use residential development. This has the potential to increase the number of employees accommodated on site by incorporating a significant amount (up to 2,757sq.m) of flexible start-up and small scale hybrid business space, with an anticipated focus on office uses.

4.19 Feedback from local and regional commercial property market agents indicates that availability of office space is currently limited across the wider South West London market and LB Richmond more specifically, with the recent introduction of PDR for change of use from office to residential having removed significant amounts of office stock from the market over the last few years. Twickenham in particular is reported to have been successful in accommodating office occupiers who have been pushed out of more prime locations such as Wimbledon and Richmond.

4.20 The area around Twickenham provides an attractive location for start-up, small scale office space, currently characterised by a buoyant market for this type of flexible workspace. Demand is reported to be strong, driven by both local firms seeking a start-up base and larger corporate occupiers seeking to decentralise from Central London and encourage more efficient working practices. Limited availability of flexible office space in locations like Chiswick, Hammersmith and Richmond which have traditionally accommodated this type of provision is also pushing occupiers out to locations like Twickenham.

4.21 There are a couple of existing hybrid/flexible business centres in Twickenham including Regal House next to the station (part operated by Regus) and a number of units at Links Industrial Estate which provide a mix of office and workshop type space. The office element of these facilities is reported to be largely full, and there is considered to be latent demand in the local area for additional provision of this type, especially for new purpose built space.

Quality and Suitability of Borough Employment Sites: Evidence from the 2013 ESP Study

4.22 The Richmond Employment Sites and Premises (ESP) Study (March 2013) prepared for the Council states that there are generally few industrial and warehousing employers in the Borough and that the largest concentrations of these businesses are found in Twickenham, Richmond Fringe, Teddington and Hampton. As noted previously, the Study also shows that the majority of the industrial and warehousing business in the Borough are micro businesses servicing the local economy e.g. auto repair stations; storage; repair

workshops and small scale production and scattered around the borough. It was noted that there are very few large industrial sites in the Borough and some of the industrial sites have been lost to other non-employment uses in the Borough. The Study concluded that in terms of employment land, these sites are most vulnerable to conversions to non-employment uses.

4.23 The Study also considers the quality and suitability of the Borough's industrial sites and buildings. It considers that they are often old, coming to the end of their useful lives and there is likely to be pressure for redevelopment. In terms of Twickenham specifically, it recommends that a better, more attractive mix of uses near the station, and work to improve access to secondary space to the west would greatly help to improve the stock. The Study considers that the Greggs Bakery site 'dominates attention' and is 'obviously important' but that the land around it is 'suffering from attritional loss to residential' uses recognising that access would need to be improved to 'ameliorate impacts upon residential areas' or it would 'present a policy challenge'.

4.24 Whilst the report identifies other industrial units in Twickenham and highlights that the largest site - Twickenham Industrial Estate - lies within adjoining LB Hounslow, it makes limited judgment on the quality of the units individually and does not provide a definitive conclusion for the Greggs Bakery site. It does note that the Borough's industrial buildings are often old, coming to the end of their useful lives and there is likely to be pressure for redevelopment.

4.25 In the report conclusions, the authors considered that the Borough has few industrial sites and many of these are constrained by accessibility factors adding that Hampton and Twickenham are the Borough's key industrial property markets. In its recommendations, the Study concludes that:

"the fundamental case for protecting this type of space lies at the borough-wide level: whether through cyclical shortage or structural under-representation, the stock of this space is small and fragmented. Even when not especially neighbourly, nor pleasing to the urban fabric, there is no real sign of vacancy other than in the most isolated pockets. In addition much of the space is currently used to service local economy and local residents" (Para 9.14).

4.26 Notwithstanding this, the report goes on to note that:

"larger industrial sites servicing a wider economy are very few and far between and as the buildings near the end of their functional life they will come under pressures for conversion. Many of the sites suffer from real accessibility constraints and for this reason are not likely to meet industrial occupier's future needs. Mixed use developments with an employment element should be supported on these sites and where possible, space to address the shortage of low-cost and simple "shed style" space that offers utility to a wide range of occupiers from transitional 'metal bashing' to new media companies" (Para 9.15).

4.27 The conflicting nature of these recommendations coupled with the absence of a transparent quality assessment of the Borough's employment sites means

that the 2013 ESP fails to provide a clear rationale for any future strategy or approach to retaining, releasing or redeveloping the Greggs Bakery site.

Conclusions and Alignment with Emerging Planning Policy

4.28 The emerging Local Plan policy LP 42 appears to reflect recognition by the Council that the Borough needs to maintain its existing stock of industrial land and slow down the rate of industrial floorspace losses that have been occurring in the Borough. This policy position appears to have been reached against the backdrop of the London Plan 'restricted' transfer category and in response to more recent supply side analysis prepared for the GLA in 2015 which suggests that the rate of industrial land loss in the Borough has exceeded GLA benchmarks over recent years.

4.29 LB Richmond are aware of the site's various constraints and factors which undermine the site's ability to accommodate employment – but particularly industrial - uses over the longer term. The underlying unsuitability of the Greggs Bakery site for industrial uses is emphasised by the firm's decision to vacate the site despite trying over a number of years to overcome the physical and financial constraints of operating the site. The Council acknowledge within their own quality assessment of the Borough's light industrial and storage stock undertaken earlier this year that the 'West Twickenham Cluster' (including Greggs Bakery) is one of the poorer performing sites in the Borough and is not considered as being worthy of protection.

4.30 In light of these known constraints, it is not clear why the site is being proposed for allocation as locally important industrial land in the 2016 Pre-Publication Local Plan (2016), beyond the assumption that this allocation is proposed in response to a Borough-wide policy to retain industrial land regardless of quality. This lack of a clear site specific logic chain and up-to-date evidence base would therefore fail to meet the London Plan policy requirement that locally significant industrial sites are designated on the basis of robust evidence demonstrating their particular importance for local industrial type functions to justify strategic recognition and protection. The proposed approach is not therefore considered to be sound.

5.0 Overall Assessment and Conclusions

5.1 This section draws together the analysis and evidence contained in the earlier sections to examine the case for the redevelopment of the Greggs Bakery site for residential-led mixed uses, to potentially include some commercial space for start-up businesses. In doing so it makes clear why NLP do not consider the Council's proposed approach to allocating the site as locally important industrial land to be sound.

Is the Council's evidence approach robust on the need to allocate the site for employment purposes (under New Policy LP 42 of the Pre-Publication Local Plan)?

5.2 The Council's evidence base on employment land matters is considered insufficient in terms of justifying the need to either allocate or retain all remaining industrial land in the Borough, and therefore it does not adequately justify the allocation of the Greggs Bakery site for employment purposes (specifically as 'locally important industrial land').

5.3 In particular, the Council's evidence base does not present a full objective assessment of employment land needs over the plan period taking account of the methodologies advised by the NPPF and PPG. It fails to meet the key PPG requirement to consider forecasts of quantitative and qualitative need for employment land and estimate the scale of future needs based on a range of data which is current and robust.

5.4 The site has never previously been allocated for employment or industrial uses, and has therefore never previously been considered by the Council to be amongst the Borough's most important sites for employment uses and in need of protection for such uses. The principle of allocating the site for a broader range of uses than just employment appeared to be accepted back in 2013 (and this was broadly consistent with the conclusions presented by the 2013 ESP) and it is unclear why the focus and emphasis for allocation has now changed to be purely employment.

5.5 In absence of a clear logic chain, it can be assumed that this proposed allocation has been driven by the London Plan's 'restricted' transfer category for LB Richmond, and also by recent industrial supply side analysis undertaken by the Council in 2016 which points to the Borough as a whole having recorded continual losses of industrial space over recent years, with increasing pressure now being placed on the Borough's remaining sites to accommodate needs going forward.

5.6 Crucially however, this approach fails to take account of up-to-date demand side factors, evidence and projections of industrial space needs in the Borough. It would also appear to contradict the Council's own evidence on the intrinsic quality and suitability characteristics of the Greggs Bakery site and its potential for supporting industrial activity over the longer term. This lack of

evidence and transparent logic chain does not meet the London Plan requirement for locally significant industrial sites to be designated on the basis of robust evidence demonstrating their particular importance for local industrial type functions to justify strategic recognition and protection and therefore cannot be considered to be sound.

Is the Greggs Bakery site required to meet future economic and business needs in LB Richmond?

5.7 As noted above, LB Richmond does not have an up-to-date objective assessment of employment land needs and appears to be relying upon economic growth projections and estimates of employment land requirements that were prepared as part of the 2013 ESP using data from 2011 and 2012.

5.8 Subsequent technical employment studies by the Council have sought to update this evidence in a piecemeal and fragmented way, although these have focused on supply side issues only and it is therefore difficult to compile an up-to-date picture of the balance between employment (and specifically industrial) land demand and supply in the Borough.

5.9 In terms of industrial uses, the 2013 ESP concluded that there was scope for LB Richmond's portfolio of industrial land to reduce in scale over the study period to 2031, driven by a decline in demand for traditional industrial offset by some increased demand for warehouse uses and some waste activity. This means that there is a quantitative case for a reduction in industrial land across LB Richmond overall during the Plan period and therefore not all industrial land in the Borough needs to be retained or specifically protected for such uses.

5.10 The Greggs Bakery site has been assessed by both the 2013 ESP and the Council's own assessment of light industrial and storage stock in 2016 with neither study concluding that the site performs particularly well across a range of quality and suitability characteristics and criteria. The 2013 ESP did not recommend that the site be protected for employment uses, and the Council's 2016 assessment did not describe the site as being of "good" or "high" quality and therefore considered worthy of protection.

5.11 From a more qualitative perspective, the Greggs Bakery site represents an incompatible use in a largely residential area and suffers from a range of physical and amenity constraints that together are significant enough to undermine the site's ability to accommodate industrial uses over the longer term. A combination of maintenance costs, problems with the building fabric and physical constraints of the site has resulted in Gregg's decision to vacate the site, resulting in the loss of a major employer.

5.12 In light of known constraints, it is not clear why the site is being proposed for allocation as locally important industrial land in the 2016 Pre-Publication Local Plan (2016) and it is considered highly unlikely that the site in its current form is capable of meeting the Borough's future economic and business needs.

Would redevelopment of the site for a mixed use scheme cause harm to local employment land supply?

5.13 Industrial uses represent a secondary driver of LB Richmond's commercial property market (behind office uses) and the Borough's stock of industrial space has been gradually declining over recent years, a trend echoed across the majority of London Boroughs. Many of the Borough's industrial sites are found in unsuitable locations, with increasing pressure from incompatible uses (most notably residential) providing a key challenge to continued viability and attractiveness for industrial occupiers.

5.14 These amenity issues pose a problem in the Twickenham area of the Borough and for the Greggs Bakery site in particular where the bakery buildings are nearing the end of their functional life. They are unsuited for continued industrial use and this conclusion is supported by the Council's own assessment of industrial sites prepared earlier in 2016 which described the site as being of 'fair' quality and therefore one of the poorest scoring sites in the Borough. The unsuitable nature of the site can also be demonstrated by Greggs' decision to vacate the site by the end of 2016 and relocate to a purpose built facility outside of the Borough.

5.15 The 2013 Richmond ESP notes that the Borough's larger industrial sites are very few and far between and as the buildings near the end of their functional life will come under pressures for conversion. Many of the sites suffer from real accessibility constraints and for this reason are not likely to meet industrial occupier's future needs. For these sites, the ESP recommends that mixed use developments with an employment element should be supported on these sites.

5.16 The study also notes that *"whilst being a restrictive transfer borough Richmond Borough must seek to identify what employment land it needs to defend, and that where a more pragmatic stance can be adopted, in order to strengthen its case to retain the key sites needed to ensure efficient and sustainable functioning of local activity. The property market assessment indicates that the Borough has few industrial sites distributed through the Borough and many of these constrained by accessibility factors."*

5.17 The key message is that the Council should develop a strategy for accommodating the Borough's business needs in future by being selective about which sites to protect for employment uses, focusing on the Borough's best performing sites that are most likely to be attractive and viable for occupiers. Within this context, the Greggs Bakery site has never previously been allocated by the Council for employment uses or considered to be in need of protection. Within the Council's most recent qualitative assessments of employment land supply, the site scores relatively poorly.

5.18 Within a previous Local Plan Site Allocation consultation (in Autumn 2013), the Council proposed that the site be allocated for mixed use development, retaining an employment role by providing some employment space for start-up and creative business uses. In light of the evidence presented within this

report, a mixed use approach would appear to represent a pragmatic and sensible future use for the site, given the site's existing constraints and amenity issues, and would also provide the type of high quality flexible, small scale business space (with a focus on flexible B Class uses) that is expected to drive occupier requirements in LB Richmond over the plan period.

5.19 Given that the current site largely comprises low density manufacturing floorspace, it is envisaged that the current scale of jobs supported on site (c.200) can be re-provided through a mix of higher density B Class uses. This approach would also enable the site to better meet the needs of local working residents; Greggs confirm that the skill set required to operate the bakery site in its current use means that its (lower skilled) employees commute into LB Richmond from neighbouring Boroughs.

5.20 In this respect, it is not considered that the redevelopment of the Greggs Bakery site for a mixed use scheme would cause harm to local employment land supply in LB Richmond. It would be consistent with the recommendations made by the 2013 ESP for the Borough's larger industrial sites suffering from real accessibility constraints to support mixed use developments with an employment element, and would provide a more appropriate mix of employment space of the type demanded in LB Richmond, as well as an opportunity to re-configure the site to better meet the needs of modern business occupiers.

5.21 Greggs are committed to securing the best long-term use for the site and a mixed-use residential development has the potential to increase the number of employees accommodated on site by incorporating a significant amount of flexible start-up and small scale hybrid business space, including an element of office uses. Twickenham represents an attractive location for start-up, small scale office space, and demand is reported to be strong driven by both local firms seeking a start-up base and larger corporate occupiers seeking to decentralise from Central London and encourage more efficient working practices. Existing hybrid/flexible business centres in Twickenham are reported to be full, and there is considered to be latent demand in the local area for additional provision of this type, especially new purpose built space.

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Greggs Bakery, Gould Road, Twickenham

TRANSPORT STATEMENT

Report

Greggs Bakery, Gould Road, Twickenham

TRANSPORT STATEMENT

Report

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Appendices

1 Introduction

CONTEXT

1.1 JMP Consultants Ltd have been commissioned by Colliers International to provide transport consultancy services for a site located off Gould Road and Edwin Road in the London Borough of Richmond upon Thames (LBRuT), with potential for a residential-led mixed-use planning application. The site currently comprises production facilities for Greggs Bakery but is surplus to requirements and therefore is due to be closed.

1.2 The area is typified by primarily residential uses currently and there are limited industrial uses in the locality. However, a number of office-to-residential schemes in the area have been granted planning permission highlighting the increasing transition to residential. The nature of the local area's narrow Victorian terraced streets, in terms of transport and movement, is unsuitable for a modern large scale industrial location and an allocation of the site for industrial or solely office use is not appropriate now or in the future.

1.3 A detailed description of the proposed redevelopment is included in Chapter 5 of this report. In brief, the new scheme proposals comprise the provision of approximately 96 residential units and 2,757m^2 of start-up commercial space. The development masterplan is provided in Appendix A.

1.4 This Transport Statement (TS) reviews the site's suitability for residential and commercial use in transport terms, and the reasons why industrial development of this nature is not suitable in this location and as a result why the land use designation should be reviewed. It also identifies existing and potential traffic and transport impacts related to the site and its proposed future operation.

REPORT STRUCTURE

1.5 This TS details the transport issues of the existing Greggs site and the potential impacts of the redevelopment proposal. It is divided into the following remaining sections:

- **Section 2: Policy review** – Provides a summary of the current national and local planning and transport policy that is relevant to the existing and proposed redevelopment;
- **Section 3: Existing conditions** – Describes the existing transport and highways conditions prevalent at the site and in the surrounding area;
- **Section 4: Existing site** – Provides an overview of the site's existing use;
- **Section 5: Redevelopment proposals** – Summarises the redevelopment proposals including proposed access and car and cycle parking arrangements;
- **Section 6: Multi-modal trip generation** – A multi-modal assessment of trips associated with the existing site and the proposed redevelopment;
- **Section 7: Suitability of the site for continued industrial use** – Evaluation of the suitability of the site for future industrial or mixed-use; and
- **Section 8: Summary and conclusion** – Provides a summary of the proposed redevelopment arrangements and its impact on the local area.

2 Policy Review

INTRODUCTION

2.1 This chapter reviews current and emerging land use and transport planning policies at national and local government levels, and summarises how the proposed redevelopment should comply and how the existing site is not in compliance with current policy.

NATIONAL POLICY

National Planning Policy Framework (NPPF) (2012)

2.2 The NPPF was published on 27 March 2012 and it came into effect immediately, superseding all other national planning policy (except on waste).

2.3 The document sets out the government's economic, environmental and social planning policies for England and it's expectation for their application. It is meant as high level guidance for local councils to use when defining their local and neighbourhood plans. This approach allows the planning system to be tailored to reflect the needs and priorities of individual communities.

2.4 The essence of the document is to support sustainable development, defined as 'meeting the needs of the present without compromising the ability of future generations to meet their own needs' (p.2).

2.5 The NPPF defines the delivery of sustainable development through three roles:

- Planning for prosperity (an economic role);
- Planning for people (a social role); and
- Planning for places (an environmental role).

2.6 It notes that to archive sustainable development, these roles should be sought jointly and simultaneously through the planning system.

- At the heart of the NPPF is a presumption in favour of sustainable development which 'should be seen as a golden thread running through both plan making and decision taking' (Paragraph 14). In paragraph 15, it goes onto say that 'Policies in Local Plans should follow the approach of the presumption in favour of sustainable development so that it is clear that development which is sustainable can be approved without delay'.

2.7 A sustainable transport mode is described as 'any efficient, safe and accessible means of transport with overall low impact on the environment, including walking and cycling, low and ultra-low emission vehicles, car sharing and public transport' (Annex 2, p.57).

2.8 Paragraph 32 states that developments that generate significant amounts of movement should be supported by a Transport Statement and Transport Assessment. It goes on to state that plans and 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 sustainable access to the site can be achieved for all people; and
- Improvements can be undertaken within the transport networks that cost-effectively limit the significant impacts of the development. Developments should only be prevented or reused on transport ground where the residual cumulative impacts of development are severe'.

2.9 Paragraph 34 seeks to ensure that 'developments that generate significant movement are located where the need to travel will be minimised and the use of sustainable transport modes can be maximised'.

2.10 Paragraph 35 goes on to state that 'plans should protect and exploit opportunities for the use of sustainable transport modes for the movement of good or people'. Therefore, 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 that minimise conflicts between traffic and cyclists or pedestrians, avoiding street clutter and where appropriate establishing home zones;
- Incorporate facilities for charging plug-in and other ultra-low emission vehicles; and
- Consider the needs of people with disabilities by all modes of transport'.

LOCAL POLICY

Further Alterations to the London Plan (FALP) (2015)

2.11 The FALP sets out the Mayor's vision for the development of London up to 2031. It is an overall strategic plan, setting out an integrated economic, environmental, transport and social framework for the development of London.

2.12 The Mayor's overarching vision for London is that:

- The city should 'excel among global cities – expanding opportunities for all its people and enterprises, achieving the highest environmental standards and quality of life and leading the world in its approach to tackling the urban challenges of the 21st century, particularly that of climate change' (para 1.52)

2.13 Enabling sustainable modes of transport is considered to support this vision. The Plan notes that London should be:

- 'A city where it is easy, safe and convenient for everyone to access jobs, opportunities and facilities with an efficient and effective transport system which actively encourages more walking and cycling and makes better use of the Thames, and supports delivery of all the objectives of this Plan' (Objective 6)

2.14 Strategically the Mayor intends to work with all relevant parties to (Policy 6.1):

- Encourage patterns of development that reduce the need to travel, especially by car;
- Improve the capacity and accessibility of sustainable travel modes such as public transport, walking and cycling;
- Support development with high levels of trips only in areas of high public transport accessibility;
- Improve interchange between different forms of travel;
- Minimise the impact of freight on the transport network;
- Encourage shifts to more sustainable forms of transport; and
- Promote walking by ensuring an improved urban realm.

2.15 The Gregg's Bakery site is not designated as a Strategic Industrial Location (SIL) in the FALP and therefore is not protected as a main reservoir of London's industrial and related capacity. SILs are typically located close to the strategic road network and are also well located with respect to rail and waterways which can address broader transport objectives. Policy 4.4, on the management of industrial

land and premises, states that the release of surplus industrial land should be planned, monitored and managed so that it can contribute to strategic and local planning objectives, especially those to provide more housing. The plan also states that the release of surplus industrial land should, as far as possible, be focused around public transport nodes to enable higher density redevelopment, especially for housing.

2.16 Policy 6.1 states that the plan encourages patterns of development that reduce the need to travel, especially by car, and supports development that generates high levels of trips in locations with high public transport accessibility. The plan also requires that developments do not adversely affect safety on the transport network (Policy 6.3).

Parking Standards

2.17 Table 2.1 summarises the car parking provision standards provided in The London Plan for the relevant elements of the proposed redevelopment. It should be noted that the redevelopment is in an area with a PTAL of 2.

Table 2.1: Car Parking Standards (The London Plan, 2015)

Land Use	Standard	Parking Spaces
Residential (suburban) – per unit in areas with PTAL 2 to 4 (maximum spaces)	1-2 bedrooms per unit	Up to 1.5 space per unit
	3 bedrooms per unit	Up to 1.5 space per unit
	4+ bedrooms per unit	Up to 1.5 space per unit
Employment uses – B1	Per 100-600m^2 GIA	1 space

2.18 It should be noted that 20% of car parking spaces for new developments in London are required to provide electrical charging points to encourage the update of electric vehicles, with residential developments required to provide an additional 20% passive provision for future use and employment uses to provide an additional 10%. For the employment uses, one disabled space should be provided for each employee who is a disabled motorist, with 5% of the total capacity provided as disabled spaces.

2.19 The cycle parking standards provided in The London Plan are minimum standards and are summarised below in Table 2.2 for the relevant elements of the proposed redevelopment.

Table 2.2: Cycle Parking Standards (The London Plan, 2015)

Land Use	Long Stay	Short Stay
C3/C4 Dwellings (All)	1 space per studio/1 bedroom unit 2 spaces per all other dwellings	1 space per 40 units
B1 Business offices	1 space per 150m^2	First 5,000m^2: 1 space per 500m^2 Thereafter: 1 space per 5,000m^2

Mayor of London's Transport Strategy (MTS) (2010)

2.20 The Mayor's Transport Strategy, published in 2010, contains five main objectives (Chapter 1, para 2):

- Support economic development and population growth;
- Enhance the quality of life for all Londoners;
- Improve the safety and security of all Londoners;
- Improve transport opportunities for all Londoners; and
- Reduce transport's contribution to climate change and improve its resilience.

2.21 The Mayor's transport vision for London (Chapter 2, para 29) is that 'London's transport system should excel among those of global cities, providing access to opportunities for all its people and enterprises, achieving the highest environmental standards and leading the world in its approach to tackling the urban transport challenges of the 21st century'.

2.22 The Mayor's Transport Strategy gives an indication of the London travel mode share that could be achieved by 2031 with implementation of the Strategy, showing a 3% increase in cycle mode share (to 5% overall) and a 6% decrease in travel by private motorised means (to 37% overall) (p 36).

2.23 It is noted that the Mayor will encourage the use of sustainable travel through 'setting appropriate parking standards, encouraging smarter travel planning and making public transport more attractive' (Chapter 4, para 147).

2.24 The Mayor notes that TfL will continue to work with boroughs to deliver smarter travel initiatives 'to encourage people to choose between the full range of travel options and increase the share of journeys made by walking, cycling and public transport' (Chapter 4, para 158). The Strategy supports greater cycle participation by making cycling a transport priority. It is noted that 'there will be unprecedented levels of investment in cycling over the next 10 years to improve cycle infrastructure and information' (Chapter 5, para 444).

2.25 The Mayor also intends to improve facilities for pedestrians by developing key walking routes between local destinations, enhancing pedestrian space, improving crossing facilities and supporting developments that emphasise greater pedestrian permeability (Proposal 60L).

London Borough of Richmond upon Thames Core Strategy (April 2009)

2.26 LBRuT's Core Strategy was adopted in April 2009 and sets out the long-term spatial vision and objectives for the borough. The plan has three key areas that it focuses on:

- A sustainable future;
- Local character; and
- Meeting people's needs.

2.27 Concerning the future sustainability of the area, the plan states that there is a need to provide for the safe and sustainable movement of people in an area where the road network is often close to capacity. It also states that with regards to meeting people's needs, that there is an acute shortage of housing in the area and there is a need to provide an increased level of all types of housing, including affordable and accessible housing, to meet the demand.

2.28 Policy CP1 in the plan concerns sustainable development and seeks to ensure that all new development and refurbishment is as sustainable as possible and located in appropriate and accessible locations to reduce the need to travel by unsustainable modes. The strategy has a target of 95% of all new or converted housing to be built on previously developed land.

2.29 LBRuT considers that locating development in sustainable areas and reducing the need to travel by promoting walking, cycling and the use of public transport is the most sustainable way to plan for the Borough's future travel needs. The plan also states that the reducing and management of car travel will contribute to an improvement in air quality, a reduction in traffic noise nuisance and an improvement in the population's health.

2.30 Spatial policy CP9 relates to Twickenham Town Centre, to the southeast of the site. The policy states that the LBR intends to revitalise the area to achieve a high quality district centre and will encourage higher density development including affordable and small units and car free development in the town centre. The policy also states that they council is aiming to manage flows and reduce the dominance of vehicles in the town centre environment.

London Borough of Richmond upon Thames Parking Standards (2011)

2.31 LBRuT's parking standards are included in Appendix Four of the Development Management Plan (DMP), which was adopted in November 2011. The car parking standards shown in Table 2.3 are the maximum standards and are relevant for sites outside of controlled parking zones (CPZs), such as the Greggs site in Twickenham.

Table 2.3: Car Parking Standards (LBRuT, 2011)

Land Use	Standard	Parking Spaces
Residential (outside of CPZs)	1-2 bedrooms per unit	1 space
	3 bedrooms per unit	2 spaces
	4+ bedrooms per unit	2 spaces
Employment uses – B1 (outside of CPZs)	Per 100m^2	1 space
	Per 2,500m^2	1 lorry space per unit

2.32 Table 2.4 summarises the minimum cycle parking standards in Richmond for the relevant elements of the scheme.

Table 2.4: Cycle Parking Standards (LBRuT, 2011)

Land Use	Standard
C3/C4 Dwellings (All)	1 space per 1-3 bedroom unit 2 spaces per 4+ bedroom units
B1 Business offices	1 space per 200m^2

Twickenham Area Action Plan (July 2013)

2.33 The Twickenham Area Action Plan was adopted in July 2013 and forms part of the wider LBRuT Local Plan. The area covered by the plan comprises the central area of Twickenham, including part of the A305 Heath Road to the southeast of the Greggs Bakery site. While the site is not included in the plan area, the route to the A316 Chertsey Road and wider strategic road network requires access through central Twickenham and the plan area.

2.34 The plan states that the dominance of vehicular traffic, which adversely impacts on the pedestrian environment, is a key issue in Twickenham. One of the five key themes of the plan is to improve the public realm and reduce the impact of vehicular traffic on the area, making it a safer and more attractive place to visit.

SUMMARY

2.35 This chapter has provided a summary of the relevant national and local policies and has shown that the key policies with which the proposed redevelopment should comply are:

- The proposed redevelopment should be located in an area accessible by public transport, walking and cycling, and the use of these forms of transport by residents and visitors to the site should be encouraged;
- The proposals do not cause residual cumulative impacts that are severe in terms of road safety or operation, or cause unacceptable environmental intrusion;
- Car and cycle parking should be provided in line with the London Plan; and

- The scheme should be designed to provide improved circulation and accessibility for pedestrians and cyclists.

2.36 It has also highlighted how the existing site currently does not comply with the policy requirements and would not comply if a new industrial development was proposed, including that:

- Safe and sustainable access cannot be provided for frequent movements of large vehicles due to a constrained local highway network;
- The cumulative impacts of a new industrial development would likely be classed as severe due to a potentially significant increase in the number of HGV trips to and from the site;
- The site is not situated in a location which is practical for the efficient delivery of goods and supplies by large vehicle;
- The layout of the highway around the site access in combination with the frequency of HGV movements does not minimise conflicts between traffic and vulnerable road users; and
- The site is not a Strategic Industrial Location (SIL) and is not located in an area suitable for a SIL.

3 Existing Conditions

INTRODUCTION

3.1 This section of the TS describes the existing or baseline transport conditions at the existing site and in the surrounding area. The baseline conditions need to be established to fully understand the context of the proposed change of use and the associated traffic and transport impacts.

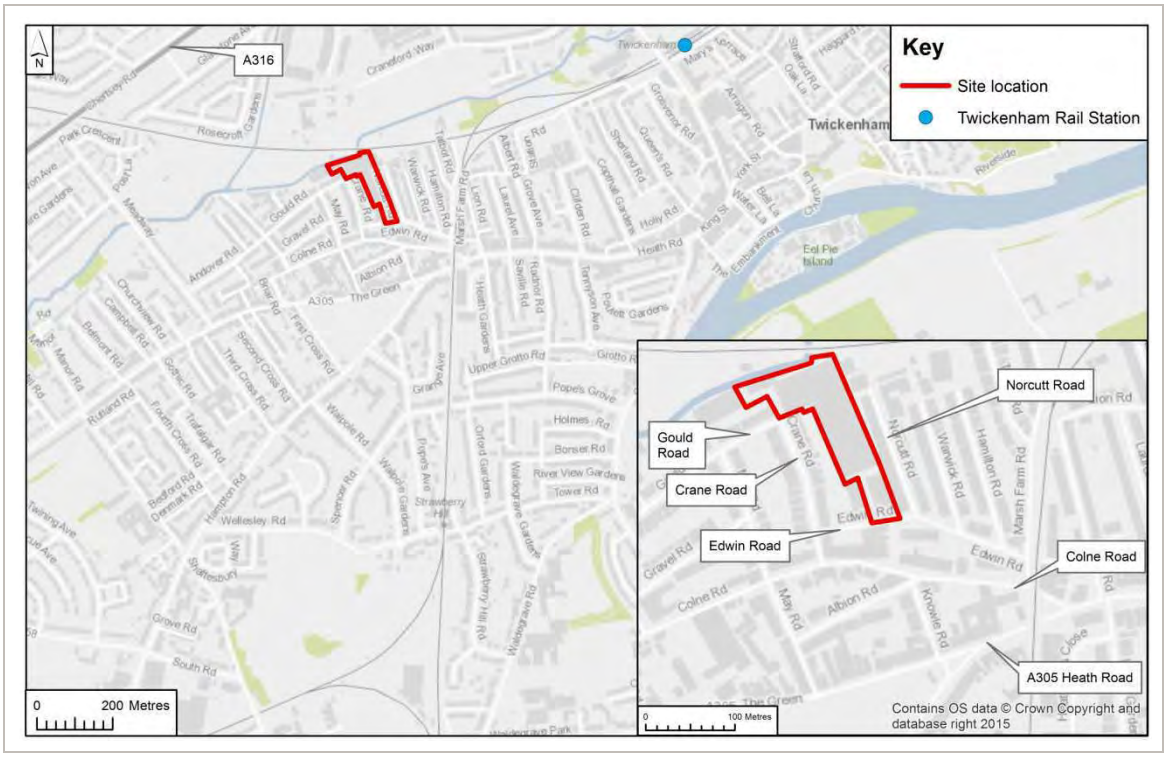
SITE LOCATION AND LOCAL HIGHWAY NETWORK

3.2 This section will review the local roads on the local highway network identified as key to the Greggs operations in Twickenham.

3.3 The site is bounded by Edwin Road to the south, the existing residential streets of Crane Road and Norcutt Road to the west and east, respectively, and the River Crane and railway lines to the north. The site is accessed via two simple priority junctions; one at the intersection of Gould Road and Crane Road, and the other on Edwin Road.

3.4 The site's location in the context of the wider local highway network is shown in Figure 3.1.

Figure 3.1: Site location and local highway network



3.5 The site is currently used as a production facility for Greggs Bakery and has two vehicular accesses; one on Edwin Road and the other on Gould Road. The site access on Edwin Road is approximately 7.7m wide and takes the form of a priority junction, as shown in

3.6 Figure 3.2. This access is the primary point of access to the site for heavy goods vehicles (HGVs) and bakery deliveries. The access on Gould Road, shown in Figure 3.3, is a priority junction at the point where Gould Road and Crane Road meet, and serves as the primary access for cars and office related

deliveries by light goods vehicles (LGVs). The access is approximately 5.0m wide. Good visibility can be achieved from both of the accesses in each direction. However, it should be noted that cars parked too close to the junctions can cause a reduction in the visibility achievable.

Figure 3.2: Site access on Edwin Road

Figure 3.3: Site access on Gould Road at its intersection with Crane Road

3.7 Both Gould Road and Crane Road are quiet Victorian terraced residential streets, which both have a carriageway width of approximately 7.2m. The roads experience on-street parking on both sides of the carriageway resulting in vehicles in only one direction being able to use the road at once due to it having a usable width of approximately 3.4m. As the road is not a major through-route for traffic this does not

appear to cause significant issues with congestion. The road is not part of a Controlled Parking Zone (CPZ) although there are double yellow lines on both sides of the carriageway where both roads meet in the vicinity of the site access. Figure 3.4 and Figure 3.5 show the existing situation on Gould Road and Crane Road, respectively.

Figure 3.4: On-street parking on Gould Road

Figure 3.5: On-street parking on Crane Road

3.8 Approximately 140m to the south of the site access on Gould Road, Edwin Road forms a priority T-junction with Crane Road, as shown on Figure 3.6. Cars park opposite the junction reducing the available space that larger vehicles may need to complete the turn. The junction is located approximately 65m to the west of the site access on Edwin Road and has a sign stating that it is 'Unsuitable for HGVs'.

Figure 3.6: Priority T-junction of Edwin Road and Crane Road

3.9 The western end of Edwin Road is characterised by the industrial use of the Greggs Bakery and light industrial land uses associated with a number of vehicle maintenance garages. In the vicinity of the site access, the road has a carriageway width of approximately 7.1m. There are double yellow lines painted on the northern side of the carriageway along the frontage of the bakery and the neighbouring garage, and on the southern side along the frontage of the three vehicle maintenance garages. Elsewhere there are no restrictions and as a result the road experiences significant un-restricted on-street parking. To the west of the Greggs access, parked cars are solely on the carriageway but to the east, cars on the northern side of the carriageway were observed parking partially on the footway, as shown in Figure 3.7. This is likely to be a result of drivers trying to reduce the potential for conflict with HGVs accessing the Greggs site. Despite some restrictions, cars are still able to park to within approximately 4.0m of the access on the northern side of the carriageway, creating the potential for conflict with HGVs accessing and egressing from the site.

Figure 3.7: On-street parking on Edwin Road

3.10 To the east of Norcutt Road, Edwin Road is predominantly residential, with a mixture of flats and houses, and has a carriageway width of approximately 7.5m. Similarly to the surrounding roads, this section of Edwin Road experiences significant on-street parking on both sides of the carriageway, resulting in a useable carriageway width of approximately 3.7m which is sufficient for one vehicle to pass despite the road allowing two-directional traffic.

3.11 At its far eastern end, Edwin Road becomes Marsh Farm Road before forming a priority T-junction with Colne Road. Marsh Farm Road is a two-directional road and has a carriageway width of 4.6m with

double yellow lines on both sides of the carriageway. The transition from Edwin Road to Marsh Farm Road comprises an almost 90° blind bend which as shown in Figure 3.8 is not suitable for frequent HGV use due to its narrow nature which requires HGVs to use the entire width of the carriageway and partially mount the kerb to make the manoeuvre.

Figure 3.8: HGV negotiating corner between Marsh Farm Road and Edwin Road

3.12 The junction of Marsh Farm Road and Colne Road comprises a minor priority T-junction to the west of a railway bridge with a height restriction of 13'6", as shown in Figure 3.9. In the vicinity of the junction, Colne Road has a carriageway width of approximately 5.1m. Due to the confined nature of the junction and the narrow width of both roads, vehicles turning into Marsh Farm Road from Colne Road occupy both lanes while making the manoeuvre presenting a risk to other oncoming vehicles. It should also be noted that the visibility to the east of the junction is restricted due to obstruction caused by the railway bridge, as shown in Figure 3.10. This causes significant risk of conflicts between other road users and HGVs.

Figure 3.9: Height restriction for bridge on Colne Road

Figure 3.10: Junction of Marsh Farm Road / Colne Road

3.13 The priority T-junction of Colne Road and Heath Road is the point of access for HGVs from the wider highway network to the residential streets that provide access to the Greggs facility. Due to its priority nature, large vehicles turning right into or out of the junction may experience delays at peak times due to heavy traffic flows and needing to wait for gaps to manoeuvre. The junction is shown in Figure 3.11.

Figure 3.11: Junction of Colne Road / A305 Heath Road

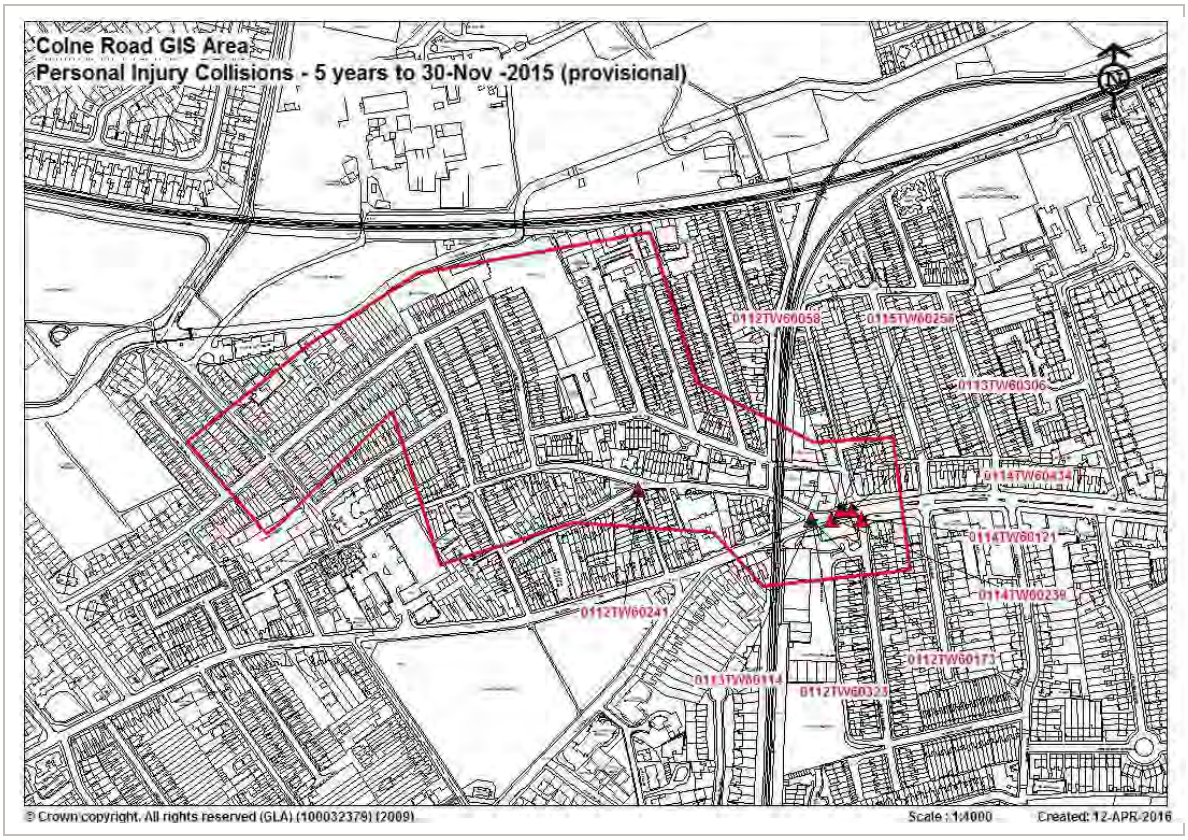
3.14 The on-street parking issues experienced on the roads in the vicinity of the site are a result of a number of factors in the local area. Most of the residential areas were designed in the Victoria era when cars were not commonplace. Therefore the roads are designed to be narrow and the dwellings do not have dedicated parking facilities, requiring residents to park on the road. The issue is compounded by the employment uses of Greggs and the vehicle maintenance garages, having insufficient parking capacity to cope with the demand from employees, visitors and customers. As such, additional on-street parking demand is generated by these uses. Due to the site's proximity to Twickenham Rail Station, there is also the potential that rail users are taking advantage of the unrestricted parking available on the road.

3.15 Vehicles travelling to and from the local and strategic road network to the site would route along the series of residential roads described above. These roads are aligned through residential areas and have housing fronting onto both sides of the carriageway along much of their lengths. These routes are unsuitable for high volumes of HGVs due to the detrimental impacts on residents in terms of noise, air quality and safety.

COLLISION ANALYSIS

3.16 Personal Injury Accident Data (PIA) has been obtained from Transport for London (TfL) for the latest available five year period, covering the area surrounding the Greggs Bakery site. The study area includes Crane Road, May Road, Norcutt Road, Warwick Road, Edwin Road, Colne Road between Heath Road and May Road, the Heath Road crossroads with Lion Road and Heath Gardens and Gould Road between Crane Road and Mereway Road. The study area and full data output is included at Appendix B and the locations of the incidents are shown on Figure 3.12.

Figure 3.12: Map showing location of Personal Injury Accidents (PIA)



Source: Transport for London

3.17 A total of 10 injury accidents were recorded in the study area within the most recent available five year period (December 2010 to November 2015). Of the 10 injury accidents there was one serious injury accident and nine slight injury accidents. No fatal accidents were recorded in the vicinity of the site within the most recent five year period. Of the injury accidents five involved pedal cycles, three involved motorcycles, two involved pedestrians and two involved goods vehicles (>3.5 tonnes).

3.18 The serious injury accident took place on Heath Road close to its junction with Heath Gardens and involved a cyclist being struck by the door of a heavy goods vehicle (>7.5 tonnes).

3.19 A cluster of six injury accidents took place at the Heath Road crossroads with Lion Road and Heath Gardens. Of the six injury accidents, four involved motorcycles or pedal cycles being struck by vehicles turning right. The remaining two were the result of a pedestrian being struck by a vehicle and a pedal cycle being struck by the door of an HGV (detailed above). Each of the accidents involving vehicles turning right and colliding with pedal cycles or motorcycles at the junction are considered to be a result of driver / rider error, rather than as a result of a defect in the highway given the straight and well lit nature of the area.

3.20 A total of two injury accidents took place at the Colne Road junction with Heath Road. The first injury accident at this junction involved a medium sized goods vehicle (3.5-7.5 tonnes) turning left across the path of a cyclist, resulting in the cyclist falling off. The second injury accident at this junction involved a vehicle turning right as a motorcycle was overtaking.

3.21 An analysis of the injury accidents that occurred within the study area suggests that there are no common contributory factors to the injury accidents that occurred during the most recent five year study period. It is therefore considered that there are no existing road safety issues in the vicinity of the site that would be exacerbated as a result of the proposed redevelopment.

PEDESTRIAN AND CYCLIST FACILITIES

3.22 To enable an assessment of the viability of walking between the site and key destinations in the local area it is appropriate to establish the maximum distance that people are generally prepared to walk and the destinations that exist within these distances.

3.23 The Institute of Highways and Transportation's (IHT's) guidance, Guidelines for Providing for Journeys on Foot (2000) states in paragraph 3.32 and Table 3.2 that the preferred maximum walking distance to facilities and local services is circa two kilometres. The distances for various land uses, are summarised in Table 3.1.

Table 3.1: Suggested acceptable walking distances

Definition	Town centres	Commuting / schools	Elsewhere
Desirable	200m	500m	400m
Acceptable	400m	1,000m	800m
Preferred	800m	2,000m	1,200m

Source: Providing for Journeys on Foot (IHT, 2000)

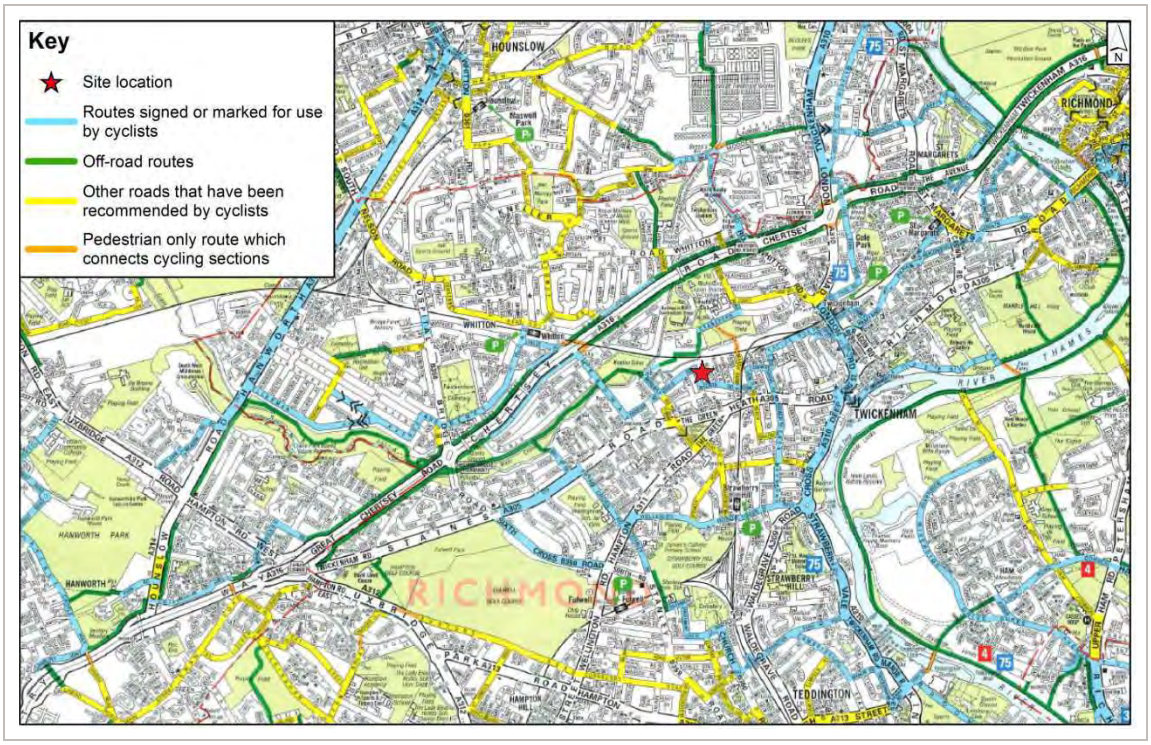
3.24 The area in the vicinity of the site has good pedestrian facilities with well-established lit footways which provide access to a wide range of local community, education, health, retail and employment facilities. The footways are approximately 1.8m wide, however it should be noted that on Edwin Road the northern footway is slightly narrower due to cars parking partially on the footway.

3.25 Cycling is considered an important mode of sustainable travel and is generally considered suitable for distances of up to 3 miles (4.8km) for regular journeys in urban areas, and 5 miles (8km) for commuting journeys (source: LTN 2/08, Cycle Infrastructure Design).

3.26 Transport for London (TfL) accessibility guidance assumes that, on average, cyclists travel at a speed of 14.4 kilometres per hour (9 miles per hour); this equates to a cycling speed of 240 metres per minute. On this basis it can be considered that any destination under 2.5 kilometres is within approximately a 10 minute cycle ride of the redevelopment site.

3.27 The site benefits from numerous formalised and recommended routes within close vicinity. Routes around the site are illustrated within Local Cycling Guide 9 (2015) produced by TfL for the area surrounding the site including Hounslow, Heathrow, Feltham, Twickenham, Wandsworth, Richmond, Kingston, Surbiton and Wimbledon. The cycle guide has been reproduced for the area surrounding the site in Figure 3.13.

Figure 3.13: Local cycle network



Source: Transport for London

3.28 Locally there are continuous light blue or yellow ('signed' or 'TfL recommended') cycle routes on Gould Road, Crane Road, Edwin Road, Lion Road, Station Road, Andover Road and Meadway. The key off-road (green) route along the A316 towards Central London can be accessed via a link crossing the river to the north of Marsh Farm Road, or via a link north of Gould Road. Together these provide connections to various residential areas and amenities as well as a public transport interchange at Twickenham.

3.29 The level of accessibility at the site to formal cycle facilities and the number of services, residential areas and public transport interchanges that can be reached within a reasonable cycle distance ensure that cycling is a viable mode to and from the site and can readily form part of a multi-modal trip. The local topography is not considered to impede travel by walking or cycling in the local area.

PUBLIC TRANSPORT NETWORK

Public Transport Accessibility Level (PTAL)

3.30 The PTAL assessment is a detailed and accurate measure of the accessibility of a point to the public transport network, taking into account walk access time and service availability. This provides a method of measuring the density of the public transport network at any location within Greater London. This method has been agreed by the London Borough-led PTAL development group as the most appropriate for use across London, and is set out in the TfL document Measuring Public Transport Accessibility Levels published in April 2010.

3.31 PTAL considers the walking time to public transport access points, the reliability of the service modes available, the number of services available within the catchment, and the level of service (i.e. average waiting time). The PTAL is categorised in 6 levels, where 6 represents a high level of accessibility and 1 a low level of accessibility.

3.32 The PTAL of the proposed redevelopment site has been calculated using the TfL tool WebCAT. The database indicates that the site has a PTAL of 2, which represents a 'poor' level of accessibility to public transport. The PTAL report is provided at Appendix C.

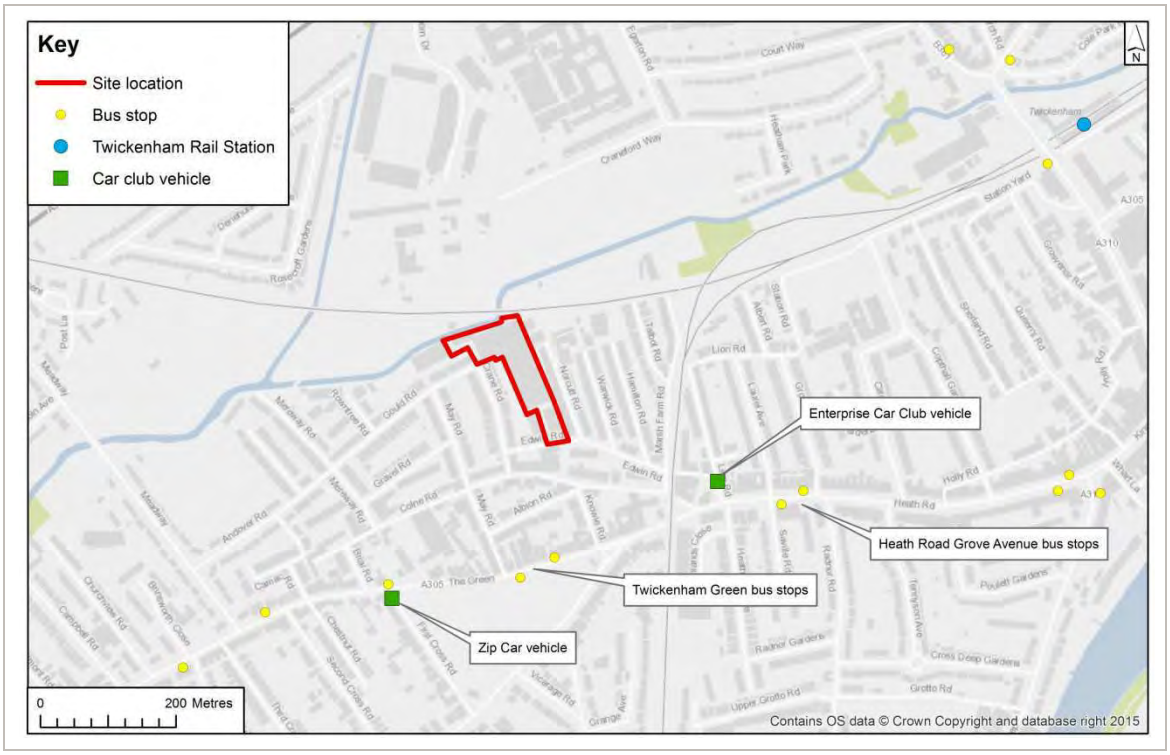
3.33 The PTAL score does not take into consideration the location of the redevelopment site adjacent to good walking and cycling links or its proximity to a number of services, amenities or residential areas within Twickenham. A range of key destinations can be accessed by a number of travel modes providing potential site users with a real and genuine choice of travel modes without needing to rely on the private car.

Local bus connections

3.34 The proposed redevelopment site lies within close proximity to good existing public transport routes. PTAL guidance considers that people are willing to walk up to eight minutes in order to access bus stop infrastructure. It also assumes that, on average, pedestrians will walk at a speed of 4.8 kilometres per hour (3 miles per hour) whilst travelling to a bus stop. This equates to a walking speed of 80 metres per minute. Thus, TfL consider that bus stops within 640 metres of a development (80 metres x 8 minutes) are considered to be accessible.

3.35 As shown on Figure 3.14, the closest bus stops to the site are the Twickenham Green stops approximately 450m to the south of the site and the Heath Road Grove Avenue stops, approximately 550m to the southeast of the site. The Heath Road Grove Avenue stops and the westbound stop at Twickenham Green include shelters, seating and timetable information. The northbound stop at Twickenham Green has timetable information.

Figure 3.14: Sustainable transport network



3.36 The services from these stops offer a minimum daytime combined frequency of 37 buses every hour, providing frequent and direct connections with various locations in London including Isleworth, Hammersmith, Kingston, Fulwell, Hounslow, Staines, Richmond and Heathrow. The stops are also served by a night bus service (N22) between Piccadilly Circus and Fulwell which has a frequency of

every 30 minutes. A summary of the bus services which stop at the Twickenham Green and Heath Road Grove Avenue stops is provided in Table 3.2. The table also highlights which stops can be used to access Twickenham Rail Station.

3.37 The level of accessibility to frequent bus services to a wide range of locations and destinations ensures that travel to and from the site by bus is a viable mode and can readily form part of a multi-modal trip involving National Rail.

Table 3.2: Summary of bus services

No.	Route	Stops served	Approx. frequency	Serves Twickenham Rail Station?
110	Arragon Road – West Middlesex Hospital	Twickenham Green, Heath Road Grove Avenue	Every 20 minutes	✗
267	Hammersmith Bus Station – Fulwell Bus Garage	Heath Road Grove Avenue	Every 8-12 minutes	✓
281	Tolworth Tower – Hounslow Bus Station	Heath Road Grove Avenue	Every 7-9 minutes	✓
290	Arragon Road – Staines Bus Station	Heath Road Grove Avenue	Every 20 minutes	✗
490	Pools on The Park – Heathrow Terminal 5	Twickenham Green, Heath Road Grove Avenue	Every 8-13 minutes	✗
H22	The Bell - Manor Road	Twickenham Green, Heath Road Grove Avenue	Every 10-13 minutes	✗
N22	South Road / Fulwell – Piccadilly Circus	Heath Road Grove Avenue	Night bus – every 30 minutes	✗
R70	Nurserylands Shopping Centre – Richmond / Manor Road	Heath Road Grove Avenue	Every 9-11 minutes	✗

Source: Transport for London (13/04/2016)

National Rail connections

3.38 As shown on Figure 3.14, Twickenham National Rail Station is located approximately 1.2km east of the site. National Rail services operated by South West Trains provide connections from London Waterloo to Reading, Windsor and the Kingston and Hounslow Loop Lines. The station can be accessed within a 15 minute walk, a five minute cycle or a five minute bus ride using either the 267 or 281 services.

3.39 A summary of key National Rail services from Twickenham Rail Station is provided in Table 3.3.

Table 3.3: Summary of rail services from Twickenham Rail Station

Destination	Approx. journey time	Frequency
Richmond upon Thames	5 minutes	12 in the AM peak and 11 returning in the PM
Clapham Junction	15 minutes	17 in the AM peak and 16 returning in the PM
Kingston	13 minutes	17 in the AM peak and 16 returning in the PM
London Waterloo	30 minutes	3 in the AM peak and 2 returning in the PM

Source: National Rail (13/04/2016)

CAR CLUBS

3.40 In the coming years, London faces challenges of population growth, congestion and the environment. Car clubs provide a cost-effective and flexible alternative to owning a car, and can help tackle these challenges. Car clubs provide the convenience of owning a car without the hassle or costs of repairs, servicing or parking. Members can book cars locally for just an hour, up to a whole weekend, or longer. They reduce the need for people to own their own cars by providing access to conveniently located, high-quality vehicles on an affordable 'pay-as-you drive' basis.

3.41 The nearest existing car club, is Enterprise Car Club (www.enterprisecarclub.co.uk) which has a car approximately 375m east of the site on Lion Road. There is an additional car club space on First Cross Road, operated by Zip Car (www.zipcar.co.uk) approximately 550m southwest of the site. The locations of the car clubs in the vicinity of the site are shown on Figure 3.14.

EXISTING MODAL SHARE

3.42 The site is located within the two Mid-level Super Output Area of E02000799 and E02000797, which have been used as a proxy to determine how residents in the local area travel to work. Table 3.4 shows how the existing residents of this area currently travel to work, as obtained from 2011 Census Journey to Work data.

Table 3.4: Residents' Method of Travel to Work (MSOA E02000799 and E02000797)

Mode	Percent
Underground	6
Train	34
Bus	8
Taxi	0
Motorcycle	1
Car Driver	32
Car Passenger	1
Bicycle	7
On Foot	11
Other	0
TOTAL	100%

3.43 The data shows that 48% of residents in the local area use public transport to travel to work with the train (34%) and bus (8%) being the most popular modes, followed by the Underground (6%). Sustainable modes such as walking (7%) and cycling (11%) make up nearly a fifth of all trips. Only 32% of residents travel to work by private car, with an additional 1% car sharing. The remainder of people travel by taxi (1%), motorcycle (1%) or other (<1%) modes. Table 3.5 shows how people who are employed within the MSOAs of E02000799 and E02000797 travel to work, as calculated using 2011 Census Journey to Work data.

Table 3.5: Employees' Method of Travel to Work (MSOA E02000799 and E02000797)

Mode	Percent
Underground	4
Train	16
Bus	16
Taxi	0
Motorcycle	1
Car Driver	41
Car Passenger	2
Bicycle	7
On Foot	12
Other	1
TOTAL	100%

3.44 The data shows that 36% of people employed in the MSOAs analysed use public transport to travel to work with the train (16%) and bus (16%) being the most popular modes, followed by the Underground (4%). Sustainable modes such as walking (12%) and cycling (7%) make up nearly a fifth of all trips. Approximately 41% of employees travel to work by private car, with an additional 2% car sharing. The remainder of employees travel by motorcycle (1%), taxi (<1%) or other modes (1%).

3.45 It is therefore considered that the modal split shows a large proportion of local residents currently travel to work by sustainable means (68%). This is considered to reflect the availability of local public transport facilities.

SUMMARY

3.46 This section has evaluated the existing transport and highway conditions in the vicinity of the site and shown that:

- The site is in a sustainable and accessible location with strong connections by foot, cycle and public transport connecting the area to a variety of local facilities and amenities;
- The site is located just over a five minute walk from a number of bus services and within a 15 minute walk of Twickenham National Rail Station, connecting it to the wider London area;
- The PIA data analysis identified no pattern of accidents in the vicinity of the site that suggests that there are no existing road safety issues in the vicinity of the site that would be exacerbated as a result of the proposed redevelopment;
- The area surrounding the site is predominantly residential with a significant amount of on-street parking due to the lack of off-street parking provision resulting from the area's development in an era of low car prevalence; and
- The highway network surrounding the site is characterised by narrow carriageways and tight junction radii typical of Victorian streets and the usable carriageway width of the Edwin Road, Colne Road and Crane Road is not suitable for frequent HGV movements.

4 Existing Site

INTRODUCTION

4.1 This section summarises the existing and permitted use of the site, providing details of its operations and access arrangements.

EXISTING SITE USE AND PERMITTED USE

4.2 The site is located to the northeast of the centre of Twickenham in West London and has two access points to the highway network; via Gould Road and Edwin Road. The site is bounded to the north by the River Crane and the railway line, to the east and west by residential areas, and to the south by Edwin Road which is currently characterised by residential and light industrial uses. A plan showing the location of the site in relation to the surrounding area is included as **Error! Reference source not found.**.

4.3 The site currently comprises three buildings which house production facilities for Greggs, but is surplus to requirements and therefore is due to be closed. The site is currently used as industrial land and therefore while not suitable as a modern industrial site, could be occupied by industrial uses in the future should the proposed redevelopment not proceed.

4.4 The site has many of the typical characteristics of a Victorian factory, having expanded over time to the full capability of the original site and is now constrained for further expansion and the existing operations.

EMPLOYEES

4.5 The Greggs site currently employs 225 staff in total including factory staff and administration / management staff. The factory employees work across five different shifts covering a 24 hour period seven days a week and therefore the full workforce is never on-site at the same time. Table 4.1 below details the bakery's current shifts and the number of staff on average working at each time.

Table 4.1: Summary of Greggs Bakery shifts and employees

Shift	Number of employees working
06:30 – 15:30	43
07:00 – 16:00	32
14:00 – 23:00	15
15:30 – 00:30	22
00:00 – 09:00	15

4.6 In addition to the bakery's factory staff, there is an administration and management team who work general office hours within the range of 07:00-18:00. The number of management / admin staff on-site varies but averages approximately 20 per day.

CAR AND CYCLE PARKING

4.7 The car and cycle parking on-site can be accessed from the Gould Road entrance. There are 25 marked car parking spaces, however typically an additional extra 10 vehicles are parked informally on-site by blocking other cars in. There is a sheltered cycle storage area on-site which has the capacity for 18 cycles.

4.8 Information provided by the client suggests that employees frequently park their cars on the surrounding residential streets due to the limited number of spaces provided on-site. This is most common for employees who work on the afternoon and evening shifts and arrive when the day shift is still on-site.

4.9 The dissatisfaction of local residents with Gregg's employees parking on the surrounding streets is an issue that has been highlighted in local news stories in addition to ongoing issues with litter and congestion[1].

DELIVERIES AND SERVICING

Frequency

4.10 The access on Edwin Road serves as the primary access for HGVs and deliveries for the factory. Greggs receives approximately 20 deliveries on average each weekday and five deliveries each day on a weekend, all of which are undertaken by HGV. The first five deliveries of each day take place before 07:00, and the remaining deliveries on weekday all take place in the morning where possible. The site can accommodate approximately five HGVs at a time and vehicles are required to reverse into the site access from Edwin Road.

4.11 The site receives approximately five deliveries of office goods and materials each day via the Gould Road access. These deliveries are made by couriers in LGVs.

Vehicle routing

4.12 All Greggs drivers and companies who deliver to the site are provided with a site access plan and instructions for accessing the site using the local highway network. The instructions provided to delivery drivers are to access the site via the A305, Colne Road and Edwin Road. Drivers are requested not to follow vehicle navigation systems as these may lead them along a different route.

Congestion

4.13 A local news article[2] published in February 2012 reported that a Greggs delivery vehicle had been attacked at the site with a number of items thrown at the vehicle. The attack was linked to ongoing frustration from residents about the disruption caused by the bakery and its operations. The article states that neighbours have complained about the noise and congestion caused by HGVs parking along Edwin Road while they wait to access the site. It reports that a local resident stated that the busiest times for deliveries are at midnight, 02:00 and 05:00, which generate a significant disruption for residents.

4.14 JMP undertook a site visit on Tuesday 29th March 2016 and witnessed the disruption caused by frequent HGV deliveries to the bakery. At the time of the visit three vehicles were waiting to access the site as shown in Figure 4.1. At one point a HGV was exiting the site and due to the narrow nature of Edwin Road, a waiting HGV was required to turn into the residential Norcutt Road to provide the vehicle with enough room to pass. This caused significant disruption to an otherwise quiet residential area as shown on Figure 4.2.

[1] http://www.richmondandtwickenhamtimes.co.uk/news/9553609.Bunfight_breaks_out_over_Greggs__the_baker/

[2] as above

Figure 4.1: HGVs waiting to access the bakery via Edwin Road and blocking the carriageway

Figure 4.2: HGV turning in Norcutt Road to allow other HGVs to pass

Site access

4.15 Due to the on-street parking and the proximity of the site access on Edwin Road to the main carriageway, HGVs are often not able to turn into the site. Due to its confined nature, HGVs are not able to turn around inside the site and therefore are required to reverse into the access from Edwin Road. This presents a significant risk and can conflict with other road users, including the cars parked or waiting directly outside the access, cyclists and pedestrians. These manoeuvres are highly disruptive to the surrounding residential area causing congestion and delays to road users and pedestrians on Edwin Road and the surrounding residential roads that feed onto it.

4.16 The Freight Transport Association (FTA) design guidance 'Designing for deliveries' (2006) states that two-way access roads should be 'sufficient to accommodate the swept paths of two vehicles passing in opposite directions' with safety margins between the two vehicles and any vertical obstruction close to the carriageway edge. The document states that the total 'minimum' width of most existing two-way

straight sections of access roads is 7.3m based upon a standard vehicle width of 2.5m. On right-angled bends, such as that between Edwin Road and Marsh Farm Road, the document recommends that at the apex of the bend there is a carriageway width of 12.9m with a radius of 15m.

4.17 The useable carriageway width on Edwin Road is 3.3m due to on-street parking, which is below this FTA guideline and therefore indicates the likelihood of conflicts between HGVs and parked cars. The reduced useable carriageway width due to restricted space and parked cars, particularly in the vicinity of junctions and bends such as that between Edwin Road and Marsh Farm Road, and the site access on Edwin Road, makes access to industrial premises difficult, particularly for HGVs.

4.18 Swept path analysis has been undertaken for the area around the Edwin Road access for an articulated vehicle (16.5m) and a rigid truck, both with and without the on-street parking. These assessments represent a 'best case' scenario for access to the site by HGVs. Due to the narrow residential streets and confined access, HGVs are currently not permitted to access the site using the Gould Road access. However, swept path analysis has been undertaken for the access and the route between the site and Heath Road, the main road, to highlight its unsuitability for HGV access.

4.19 As shown on JMP Drawings ST17096-01 and ST17096-02 included in Appendix D, both the articulated and rigid vehicles experience difficulties at the junction of Colne Road / Marsh Farm Road and Edwin Road / Marsh Farm Road due to tight junction and corner radii which causes the vehicles to overshoot the kerbline and mount the kerb to make the manoeuvre. As shown on the drawings, the vehicles occupy almost all of the useable carriageway on Edwin Road, leaving little margin for error before potentially conflicting with parked cars.

4.20 Vehicles are required to reverse into the site, which as shown on Drawing ST17096-01 cannot be completed without the articulated vehicle going over the kerbline to complete the manoeuvre. In the event that cars are parked too close to the junction it is likely that the HGVs would be unable to complete the manoeuvre without clashing with parked cars. When egressing from the site, the articulated vehicle cannot do so without going over the kerbline and has little space to straighten up before reaching the parked cars on the southern side of the carriageway. As such, if cars were illegally parked or pulled over on the yellow lines there would inevitably be conflicts with HGVs accessing the site.

4.21 The existing site is not considered appropriate for future development as a modern industrial site due to restricted HGV access as a result of significant levels of on-street parking on Edwin Road, Gould Road and Crane Road. As such redevelopment for industrial-related employment purposes will present a highway safety issue due to the current substandard access for HGVs.

SUMMARY

4.22 This section has provided a summary of the site's existing and permitted use and details of the existing site's operations, showing that:

- The site is surplus to Greggs' requirements and is therefore due to be closed;
- The site is currently used as industrial land and therefore while not suitable as a modern industrial site, such uses could continue if the site is not redeveloped;
- The site currently employs 225 staff in total, including factory and administrative / management staff. Factory staff work five shifts spread across the whole 24 hour period seven days a week and administrative / management staff work between 07:00-18:00;
- The facility services approximately 25 deliveries and collections per day, including 20 for the factory goods in the morning via Edwin Road by HGVs and five containing office supplies via Gould Road via LGVs;

- The HGV traffic generated by the factory cause significant disruption to the surrounding residential areas, including noise and traffic congestion along Edwin Road while the vehicles wait to access the site; and
- The route taken by HGVs between Heath Road and the site is not suitable for frequent HGV use due to the narrow useable width of the carriageway and the narrow nature of junctions and corners along the route. Swept path analysis has shown that HGVs can only manoeuvre between Edwin Road and Colne Road by mounting the kerb due to the space constraints on the existing highway.

5 Redevelopment Proposals

INTRODUCTION

5.1 This chapter of the TS considered the proposed redevelopment in terms of scale, land use, the site's access arrangements and car and cycle parking.

PROPOSED REDEVELOPMENT

5.2 The proposed redevelopment will replace the existing Greggs Bakery production facilities and ancillary office space with 96 residential units and 2,757m^2 of commercial start-up space. The residential units are proposed to be a mixture of apartments, townhouses and mews houses. A full breakdown by residential unit size and type is provided in Table 5.1 below and the development masterplan is included in Appendix A.

Table 5.1: Summary of residential development quantum

Type of dwelling	Number of bedrooms	Quantity provided
Flat	1 bedroom	9
	2 bedrooms	52
Mews house	2 bedrooms	2
Townhouse	3 bedrooms	15
	4 bedrooms	18
Total	**-**	**96**

5.3 The apartments are proposed to be spread across three separate buildings, the largest of which (Block C) would be six storeys and located in the northeastern corner of the site. Two smaller blocks, one with two storeys (Block B) and the other with three storeys (Block A), would be situated in the southeastern and southwestern corners of the site, off Edwin Road. A new residential street would connect the northern and southern blocks of flats, along which the three and four storey townhouses and mews houses would be arranged.

5.4 The commercial start-up space is proposed to be located in the northwestern corner of the site, off Gould Road, and would be between three and four storeys high.

ACCESS ARRANGEMENTS

5.5 The existing vehicular access at the point where Gould Road and Crane road meet would be retained and would become the primary point of access for the commercial start-up space. The access would take the form of a simple priority T-junction.

5.6 The principle of obtaining access from Edwin Road would be retained; however the proposed priority T-junction would be located slightly to the east of the existing access to the bakery. This access would be the primary point of access for the residential element of the scheme.

5.7 As shown on the development masterplan included in Appendix A, the priority T-junctions on Gould Road and Edwin Road would be linked by an internal road which provides access to the all elements of the scheme.

5.8 It should be noted that both the internal road and access junctions will be designed in accordance with the principles in Manual for Streets (2007) and will ensure that suitable visibility is achieved and that pedestrian and cycle movements are fully considered.

5.9 Pedestrian and cycle access will be provided at both the Gould Road and Edwin Road accesses with a footway provided on the western side of the Edwin Road access and on the eastern side of the Gould Road access. Footways will be provided on both sides of the internal road network and pedestrian and cycle movement will be prioritised through the design process.

PARKING PROVISION

5.10 Each residential unit on site will have allocated car parking which will be in line with the parking standards included in the London Plan and LBRuT DMP for residential development. Apartment blocks A and B will have spaces allocated which are external to the buildings, while Block C will have one storey of undercroft parking provided below the apartment block. The houses will provide allocated parking through a mixture of driveway spaces and garages.

5.11 The commercial start-up units will have undercroft parking below the three-storey section of the building. This will be provided in line with the LBRuT and London Plan standards as set out in Chapter 2.

SUMMARY

5.12 This chapter has summarised the redevelopment proposals for the Greggs site in Twickenham and shown that the proposals comprise:

- The development of 96 residential units and 2,757m^2 of commercial start-up space;
- The retention of the Gould Road vehicular access and the principle of accessing the site via Edwin Road, and the provision of an internal road connecting the two accesses;
- Pedestrian and cycle accesses via both Gould Road and Edwin Road, and the prioritisation of pedestrian and cycle movement throughout the site; and
- Car and cycle parking in line with the London Plan, including the provision of undercroft parking for the commercial space and for one of the three apartment blocks.

6 Multi-modal Trip Generation

INTRODUCTION

6.1 This chapter of the TS provides an overview of the trip generation and potential travel patterns that are anticipated to occur as a result of the proposed redevelopment. Consideration is given to trips associated with the site's existing operation, its permitted use and its proposed future use.

EXISTING SITE

6.2 As the site is currently still in operation, staff and delivery trip information has been obtained from the Greggs Bakery Manager. Using the information provided about staff shifts, employee numbers and delivery patterns (summarised in Chapter 4), first principles were used to estimate the number of trips in the AM peak (08:00-09:00), PM peak (17:00-18:00) and across a 12 hour period between 07:00-19:00 for cars/LGVs and HGVs. The following assumptions were made based upon the information provided:

- 50% of office staff work 09:00-18:00, 25% of office staff work 07:00-16:00 and 25% of office staff work 08:00-17:00;
- 41% of factory and office / admin staff drive to the site based upon Census 2011 Journey to Work data for the Twickenham MSOAs in which the site is located (E02000799 and E02000797);
- Edwin Road HGV deliveries – five before 07:00, and the remaining 15 spread evenly between 07:00-11:00;
- Gould Road LGV deliveries – three are in the morning and two are in the afternoon; and
- All deliveries are turned around within the hour.

6.3 Due to the difficulty defining more casual and irregular trips generated by the site, such as visitors to the site and staff leaving the site during their breaks, these trips have been excluded from the analysis. It should be noted however that the actual trip generation of the site is likely to be higher than the values calculated due to the omission of these trips.

6.4 The estimated trip generation of the site is summarised in Table 6.1.

Table 6.1: Existing site vehicular trip generation

Trip type	AM peak (08:00-09:00)			PM peak (17:00-18:00)			12 hour period (07:00-19:00)		
	Arrivals	Departure	Total	Arrivals	Departure	Total	Arrivals	Departure	Total
Factory based staff (cars)	0	6	6	0	0	0	15	37	52
Office / admin staff (cars)	4	0	4	0	2	2	6	8	14
Non-bakery deliveries (LGVs)	1	1	2	0	0	0	5	5	10
Bakery deliveries (HGVs)	4	4	8	0	0	0	20	20	40
Total cars /	**5**	**7**	**12**	**0**	**2**	**2**	**26**	**50**	**76**

Trip type	AM peak (08:00-09:00)			PM peak (17:00-18:00)			12 hour period (07:00-19:00)		
	Arrivals	Departure	Total	Arrivals	Departure	Total	Arrivals	Departure	Total
LGVs trips									
Total trips	9	11	20	0	2	2	46	70	116

6.5 The results show that across both peak periods there are 22 total vehicular movements, of which eight are made by HGVs. Across the 12 hour period between 07:00-19:00, there are 116 vehicle movements, of which 40 are made by HGVs.

6.6 Using the total number of car/LGV trips in Table 6.1Table 6.1 and the Census 2011 Journey to Work destination data for the Twickenham MSOAs in which the site is located (E02000799 and E02000797) as a proxy, the multi-modal trip generation of site employees was calculated. The mode shares calculated for the Twickenham MSOAs as a destination are included in Table 3.5 and the multi-modal trip generation is summarised in Table 6.2.

Table 6.2: Existing site multi-modal trip generation

Mode	AM peak (08:00-09:00)			PM peak (17:00-18:00)			12 hour period (07:00-19:00)		
	Arrivals	Departure	Total	Arrivals	Departure	Total	Arrivals	Departure	Total
Car driver	5	7	12	0	2	2	26	50	76
Car passenger	0	0	1	0	0	0	1	2	4
Tube	0	1	1	0	0	0	3	5	7
Train	2	3	5	0	1	1	10	20	30
Bus	2	3	5	0	1	1	10	20	30
Taxi	0	0	0	0	0	0	0	0	0
Motorcycle	0	0	0	0	0	0	1	1	2
Cycle	1	1	2	0	0	0	5	9	13
Walk	1	2	3	0	1	1	8	14	22
Other	0	0	0	0	0	0	0	0	0
Total	**11**	**17**	**29**	**0**	**5**	**5**	**64**	**121**	**184**

PERMITTED USE

6.7 To determine any future trip generation from the site should it be retained for industrial uses once Greggs Bakery vacates, a trip rate search has been undertaken using the latest available TRICS database (version 7.3.1) using the following parameters:

- 02 Employment – Industrial Unit;
- Located in Greater London;
- Located in a suburban area or edge of town centre area;
- Survey date of 2008 onwards;
- Any weekday; and
- Sites with a GFA up to 6,000m^2.

6.8 The only comparable industrial site available was a food production facility in Alperton, Brent (site BT-02-C-02), which has been used to calculate the vehicle trip generation for any future industrial use on the site. A summary of the trip rates for cars/LGVs and HGVs is provided in Table 6.3, with the full

TRICS outputs included in Appendix E. This assessment shows the level of trips that could be generated by another occupier within the same use classes as Gregg's current use.

Table 6.3: Permitted industrial use trip rates

Trip type	AM peak (08:00-09:00)			PM peak (17:00-18:00)			12 hour period (07:00-19:00)		
	Arrivals	Departure	Total	Arrivals	Departure	Total	Arrivals	Departure	Total
Cars / LGVs	0.115	0.098	0.213	0.147	0.394	0.541	1.969	1.688	3.657
HGVs	0.016	0.049	0.065	0.016	0.000	0.016	0.458	0.473	0.931

6.9 Using the trip rates in Table 6.3 and the site's current Gross Floor Area (GFA) of 8,309m2, the number of trips estimated to be generated by any permitted future industrial use were calculated and are provided in Table 6.4.

Table 6.4: Permitted industrial use vehicular trip generation (GFA 8,309m^2)

Trip type	AM peak (08:00-09:00)			PM peak (17:00-18:00)			12 hour period (07:00-19:00)		
	Arrivals	Departure	Total	Arrivals	Departure	Total	Arrivals	Departure	Total
Cars / LGVs	10	8	18	12	33	45	164	140	304
HGVs	1	4	5	1	0	1	38	39	77
Total trips	**11**	**12**	**23**	**13**	**33**	**46**	**202**	**179**	**381**

6.10 The results show that across both peak periods there would be 69 total vehicular movements, of which two would be made by HGVs. Across the 12 hour period between 07:00-19:00, there would be 381 vehicle movements, of which 77 would be made by HGVs, almost double the number of HGV movements as the existing site.

6.11 Using the Census 2011 Journey to Work mode share data for the Twickenham MSOAs as a destination, the multi-modal trip generation for any permitted use of the site was calculated and is summarised in Table 6.5.

Table 6.5: Permitted industrial use multi-modal trip generation

Mode	AM peak (08:00-09:00)			PM peak (17:00-18:00)			12 hour period (07:00-19:00)		
	Arrivals	Departure	Total	Arrivals	Departure	Total	Arrivals	Departure	Total
Car driver	10	8	18	12	33	45	164	140	304
Car passenger	0	0	1	1	2	2	8	7	15
Tube	1	1	2	1	3	4	16	13	29
Train	4	3	7	5	13	18	64	55	119
Bus	4	3	7	5	13	18	64	55	119
Taxi	0	0	0	0	0	0	1	1	1
Motorcycle	0	0	0	0	1	1	4	4	8
Cycle	2	1	3	2	6	8	29	25	53
Walk	3	2	5	3	10	13	47	40	88
Other	0	0	0	0	0	0	1	1	2
Total	**24**	**19**	**44**	**29**	**80**	**109**	**398**	**340**	**738**

PROPOSED REDEVELOPMENT

6.12 The redevelopment proposals involve the redevelopment of the existing Greggs Bakery site with 96 residential units and 2,757m^2 of commercial start-up space. To determine any future trip generation from the redeveloped site, trip rates were obtained from the TRICS database for residential and employment uses, using certain parameters.

6.13 The following parameters were used to calculate the residential trip rates:

- 03 Residential – Mixed private / affordable housing;
- Located in Greater London;
- Located in a Suburban Area, Neighbourhood Centre or Edge of Town Centre;
- Survey date of 2008 onwards; and
- Any weekday.

6.14 The following parameters were used to calculate the commercial start-up space trip rates:

- 02 Employment – Office;
- Located in Greater London;
- Located in a Suburban Area, Neighbourhood Centre or Edge of Town Centre;
- Survey date of 2008 onwards;
- Any weekday; and
- Sites with a GFA up to 5,000m^2.

6.15 The residential and office TRICS sites included in the analysis are summarised in Table 6.6 and the trip rates are included in Table 6.7. The full TRICS outputs are provided in Appendix E.

Table 6.6: Residential and employment TRICS sites

Land use	Site	Location	No. Units	GFA (m^2)
Residential	EG-03-M-02	Southall	143	-
Residential	HD-03-M-01	Hayes	45	-
Residential	HD-03-M-03	Hayes	261	-
Employment - office	BT-02-A-02	Wembley	-	4,750
Employment - office	IS-02-A-01	Islington	-	5,500
Employment - office	SK-02-A-02	Rotherithe	-	2,371

Table 6.7: Proposed residential and employment TRICS trip rates

Trip type	AM peak (08:00-09:00)			PM peak (17:00-18:00)			12 hour period (07:00-19:00)		
	Arrivals	Departure	Total	Arrivals	Departure	Total	Arrivals	Departure	Total
Residential (cars / LGVs)	0.078	0.249	0.327	0.165	0.089	0.254	1.211	1.378	2.589
Residential (HGVs)	0.004	0.004	0.008	0.000	0.000	0.000	0.012	0.012	0.024
Commercial (cars / LGVs)	0.444	0.096	0.540	0.143	0.467	0.610	3.605	3.241	6.846

Trip type	AM peak (08:00-09:00)			PM peak (17:00-18:00)			12 hour period (07:00-19:00)		
	Arrivals	Departure	Total	Arrivals	Departure	Total	Arrivals	Departure	Total
Commercial (HGVs)	0.000	0.000	0.000	0.000	0.000	0.000	0.024	0.024	0.048

6.16 Using the trip rates in Table 6.7 and the number of residential units (96 units) and GFA of the commercial space (2,757m^2), the number of trips forecast to be generated by the proposed redevelopment were calculated and are provided in Table 6.8.

Table 6.8: Proposed residential (96 units) and employment (GFA 2,757m^2) vehicular trip generation

Trip type	AM peak (08:00-09:00)			PM peak (17:00-18:00)			12 hour period (07:00-19:00)		
	Arrivals	Departure	Total	Arrivals	Departure	Total	Arrivals	Departure	Total
Residential (cars / LGVs)	7	24	31	16	9	24	116	132	249
Residential (HGVs)	0	0	1	0	0	0	1	1	2
Total residential	**8**	**24**	**32**	**16**	**9**	**24**	**117**	**133**	**251**
Commercial (cars / LGVs)	12	3	15	4	13	17	99	89	189
Commercial (HGVs)	0	0	0	0	0	0	1	1	1
Total commercial	**12**	**3**	**15**	**4**	**13**	**17**	**100**	**90**	**190**
Total cars / LGVs	**20**	**27**	**46**	**20**	**21**	**41**	**218**	**222**	**440**
Total HGVs	**0**	**0**	**1**	**0**	**0**	**0**	**2**	**2**	**4**
Total trips	**20**	**27**	**47**	**20**	**21**	**41**	**220**	**223**	**443**

6.17 The results show that across both peak periods combined there would be 88 total vehicular movements, of which one would be made by an HGV. Across the 12 hour period between 07:00-19:00, there would be 443 vehicle movements, of which four would be made by HGVs, ten times fewer than the number of HGV movements made by the existing site.

6.18 Using 2011 Census Journey to Work data for the Twickenham MSOAs as an origin for the residential trips and as a destination for the employment trips, the multi-modal trip generation of the site was calculated and is summarised in Table 6.9.

Table 6.9: Proposed residential (96 units) and employment (GFA 2,757m^2) multi-modal trip generation

Mode	AM peak (08:00-09:00)			PM peak (17:00-18:00)			12 hour period (07:00-19:00)		
	Arrivals	Departure	Total	Arrivals	Departure	Total	Arrivals	Departure	Total
Car driver	20	27	47	20	21	41	218	222	440
Car	1	2	3	2	1	3	12	13	25

Mode	AM peak (08:00-09:00)			PM peak (17:00-18:00)			12 hour period (07:00-19:00)		
	Arrivals	Departure	Total	Arrivals	Departure	Total	Arrivals	Departure	Total
passenger									
Tube	2	8	10	5	3	8	38	43	81
Train	11	38	49	25	14	39	182	207	389
Bus	5	18	23	12	7	19	88	100	188
Taxi	0	0	0	0	0	0	1	1	2
Motorcycle	0	2	2	1	1	2	8	9	18
Cycle	3	10	13	7	4	11	50	57	107
Walk	5	17	22	11	6	18	82	94	176
Other	0	0	0	0	0	0	1	2	3
Total	**48**	**123**	**171**	**84**	**57**	**141**	**680**	**748**	**1,428**

6.19 The results show that a total of almost 70% of employees and residents of the proposed redevelopment would travel to and from the site by sustainable modes, making it highly sustainable site in terms of transport.

NET CHANGE IN VEHICLE TRIPS

Scenario 1: Existing site and proposed redevelopment

6.20 To determine the net change in trips as a result of the proposed redevelopment, a comparison of the trip generation for the existing industrial site and the proposed residential and commercial redevelopment has been undertaken. The results are summarised in Table 6.10.

Table 6.10: Net change in trips between existing site and proposed redevelopment

Trip type	AM peak (08:00-09:00)			PM peak (17:00-18:00)			12 hour period (07:00-19:00)		
	Arrivals	Departure	Total	Arrivals	Departure	Total	Arrivals	Departure	Total
Net change (cars / LGVs)	+15	+20	+34	+20	+19	+39	+192	+172	+364
Net change (HGVs)	-4	-4	-8	0	0	0	-18	-18	-36
Net change (total)	**+11**	**+16**	**+32**	**+20**	**+19**	**+39**	**+114**	**+153**	**+327**

6.21 The comparison of the trip generation for the existing site and the proposed redevelopment shows that there is expected to be a net increase in light vehicle trips of 73 vehicles across both peak periods in total, which is equivalent to just over one additional vehicle every two minutes on average. While there would be a slight increase in light vehicles, the trips would be distributed between two accesses, rather than the one access for light vehicles, via Gould Road, that currently exists. As such, there would be an increase of just over one additional vehicle every four minutes from each access on average; which would be an imperceptible increase in traffic flow.

6.22 Changing the site to residential and commercial is estimated to lead to a reduction of 36 HGV movements across the 12 hour period assessed, of which eight would be in the AM peak period. This is a significant decrease in HGV movements considering the otherwise quiet residential nature of the surrounding area and the unsuitability of the local highway network to accommodatre these trips. This

reduction would lead to a significant improvement in traffic flow on Edwin Road, where residents often experience congestion due to HGVs blocking the road while waiting to access the constrained Greggs site.

Scenario 2: Existing site and permitted use

6.23 As the site is surplus to Greggs' operational requirements, they are planning to sell the site. Should it not be given permission for redevelopment to commercial and residential uses, the site has a permitted use for industrial uses and could be occupied by new industrial uses. As such a comparison between the trips generated by the existing site and any future industrial use has been undertaken and the results are summarised in Table 6.11.

Table 6.11: Net change in trips between existing site and permitted industrial use

Trip type	AM peak (08:00-09:00)			PM peak (17:00-18:00)			12 hour period (07:00-19:00)		
	Arrivals	Departure	Total	Arrivals	Departure	Total	Arrivals	Departure	Total
Net change (cars / LGVs)	+5	+1	+6	+12	+29	+43	+138	+90	+228
Net change (HGVs)	-3	0	-3	+1	0	+1	+18	+19	+33
Net change (total)	**+2**	**+1**	**+3**	**+14**	**+31**	**+44**	**+156**	**+110**	**+265**

6.24 The results show that the potential occupation of the site by another industrial user would lead to a total increase in 265 trips across the 12 hour period assessed compared to the existing use, of which 33 would be HGV movements. While this increase is slightly lower than if the site were redeveloped for residential and commercial uses, the difference in trips between the permitted use and the proposed use is 62 trips across the 12 hour period, which is on average five trips per hour. This is an imperceptible difference.

6.25 However, the difference in HGV movements between the permitted use and the proposed redevelopment is an increase of 69 movements across the 12 hour period if the site is continued to be used for industrial uses, which is equivalent to six additional HGV movements per hour on average along the already constrained Edwin Road. This would have a noticeable impact on the quality of the local environment for residents and would have a negative effect on the level of fear and intimidation experienced by vulnerable road users and overall residential amenity.

SUMMARY

6.26 The multi-modal trip generation assessments for the existing, permitted and proposed uses of the site has shown that:

- Compared with the existing use, the proposed redevelopment would generate 73 additional light vehicle trips across both peak hours, which is just over one additional vehicle every two minutes or one additional vehicle every four minutes from each access on average, an imperceptible difference;
- Compared with the existing use, the proposed redevelopment would generate 36 fewer HGV movements across the 12 hour period assessed between 07:00-19:00, of which eight would be in the AM peak period, resulting in a significant improvement of traffic flow on Edwin Road;

- The use of the site for industrial purposes in the future would lead to an increase in 265 trips across the 12 hour period assessed, compared with the site's existing use, of which 33 would be HGV movements; and
- If the site were redeveloped for residential and commercial purposes, there would be 69 fewer HGV movements across the day than if the site were used for industrial purposes in the future, which is equivalent to six fewer HGV movements per hour. This reduction in HGVs is more likely to be noticeable than a slight increase in car movements.

7 Suitability of Site for Continued Industrial Use

INTRODUCTION

7.1 Based upon the analysis presented in this Transport Statement, this section evaluates whether the Greggs site in Twickenham is suitable for continued industrial use, taking into account the local highway network, the safety of vulnerable road users and the impact on the environment.

SITE ACCESS AND LOCAL HIGHWAY NETWORK

7.2 The Greggs bakery site dates back to the Victorian era when factories were built with residential areas immediately surrounding it to cater for the workforce and goods were transported by barges on waterways such as the River Crane to the north of the site, and by horse-pulled carriages. While motor vehicles had been invented, they were rarely seen until the late 19th Century when they were still significantly less prevalent than today. As such, the site and the surrounding residential roads were not originally designed to cater for the volume of vehicle movements that occur today and particularly not for the size of HGVs that currently serve the site.

7.3 The total carriageway widths of the surrounding roads are not suitable for modern industrial roads according to the FTA design guidance which states that two-way access roads should have a minimum width of 7.3m, which is approximately 0.2m less than Edwin Road (7.2m wide). When considering the on-street parking along both sides of the carriageway on Edwin Road, the effective useable width of the road is only 3.3m which is less than half the minimum width for a road suitable for the site.

7.4 Furthermore, between Heath Road and the site, HGVs are required to manoeuvre around the tight junction of Colne Road and Marsh Farm Road and the corner of Marsh Farm Road and Edwin Road. Swept path analysis undertaken for an articulated HGV (16.5m) and a rigid HGV showed that the vehicles were unable to make the manoeuvre without going over the kerbline, which would result in the vehicles mounting the kerb and potentially conflicting with pedestrians. The narrow width of the two-way Marsh Farm Road also requires HGVs to occupy both sides of the road, increasing the potential for conflict with oncoming vehicles. It should also be noted that the proximity of the height restricted railway bridge to the junction of Colne Road / Marsh Farm Road means that it is unlikely that two HGVs would be able to pass each other, potentially causing queuing back to Heath Road, the main road.

7.5 The route described above is the route which vehicles are instructed to follow between the main road and the site as it is the most suitable for HGVs, but analysis has shown that it is not suitable at all for the size of vehicles accessing the site, which is typical of other industrial sites. It should be noted that alternative routes between the main road and the site are less suitable due to narrower carriageways and junctions with tighter radii.

7.6 The site access used by HGVs on Edwin Road is narrow and provides insufficient room for vehicles to turn into the site, which is further constrained by the presence of parked cars on both sides of the carriageway on the approach to the junction. As such, HGVs are required to reverse into the site access, which increases the risk of conflicting with other road users and pedestrians on the footway. Swept path analysis has shown that while reversing in, both the rigid and articulated vehicles went over the kerbline and would therefore mount the pavement, potentially conflicting with passing pedestrians. While egressing from the site, the articulated vehicle went over the kerbline and only just managed to straighten its path before conflicting with parked cars. This site access is unsuitable for HGV movements due to the constrained space on the approach to and at the access junction, and the opportunities for potential conflicts with other road users.

7.7 It should also be noted that the existing site has insufficient car parking capacity for employees and therefore there is an overspill onto the surrounding residential roads such as Edwin Road and Crane Road, which combined with residential demand for parking leads to a significant level of parking on-street. Therefore, if the site is redeveloped for mixed-use purposes where all parking is provided on-site, a reduction in the demand for on-street parking from the industrial uses would release some capacity. This would provide increased number of passing places for cars on the roads which are effectively one-way currently, improving the traffic flow along the residential streets.

7.8 As shown above, in terms of access and the local highway network, the site is not suitable for continued or future industrial use. It is heavily constrained by the narrow and residential nature of the roads and the tight radii at junctions and on bends, which are not suitable for frequent HGV movements. It is unlikely that potential occupants looking for facilities the size of the site would be interested due to the constraints presented by the highway network. Potential industrial occupants are likely to favour modern purpose built facilities which provide sufficient access on the highway network and where they are not subject to the constraints of the existing site.

PEDESTRIAN AND CYCLIST SAFETY

7.9 The characteristics and nature of the pedestrian/cycle and vehicle movements in the predominantly residential area are not conducive to HGV movements. The site has been used for industrial purposes since the Victorian era when the transport network was significantly different and HGVs did not exist. The residential areas that have grown up around the factory were also established prior to the use of HGVs and the existing intense use of the site. Therefore, the local highway network was not designed to accommodate large vehicles such as HGVs and the quantity of on-street parking on the narrow Victorian streets. As such in the interests of safety noise and air quality, the number of HGVs using the roads should be minimised to reduce potential conflicts with other road users and vehicle emissions

7.10 Land use and road user composition have a significant impact upon the safety of all road users, especially pedestrians and cyclists. The IEMA's Guidelines for the Environmental Assessment of Road Traffic provides broad principles of how to assess the impact of a scheme upon users, including the impact on fear and intimidation, amenity and accidents and safety.

7.11 The fear and intimidation of pedestrians and cyclists is dependent on the volume of traffic, the proportion of the volume comprised of HGVs, and the proximity of pedestrians and cyclists to the flow of traffic. As the footways on Edwin Road and Colne Road are not shared cycle footways, cyclists are required to cycle on the carriageway with the two-way flow of traffic.

7.12 The London Cycle Design Standards (2014) state that the dynamic envelope of a moving cyclist is approximately 1.0m, which includes an average 0.75m static width plus an allowance for movement. The document states that the minimum safe clearance distance between the edge of a cyclist and the edge of a vehicle moving at 20mph is 1.0m, which increases to 1.5m for vehicles travelling at 30mph. Therefore for vehicles to overtake a cyclist, at least a further 2.0m is required in addition to the space that the vehicle takes up on the road. The useable width of carriageway on Edwin Road is 3.3m, which does not provide sufficient width for cyclists to be overtaken safely by a car or HGV. As such, vehicles may execute unsafe overtaking procedures or follow cyclists around the road network, increasing the fear and intimidation that they experience. The redevelopment of the site as a mixed-use scheme rather than industrial-related employment would reduce the number of HGV trips, at the Greggs site and along Edwin Road and Colne Road, reducing the magnitude of fear and intimidation experienced by both pedestrians and cyclists.

7.13 Pedestrian and cyclist amenity relates to the pleasantness of a journey, and is affected by traffic flow and composition, and separation of the users from the traffic. Similarly to fear and intimidation, the redevelopment of the site as mixed-use would provide a more pleasant environment for pedestrians and cyclists, with fewer HGVs impacting upon their journey.

7.14 Due to the limited visibility of pedestrians, and especially cyclists, to HGV drivers, an increase in trips by these vehicles is likely to have a detrimental effect on the safety of vulnerable road users. This is a particular concern on Edwin Road which has significant levels of on-street parking and therefore would further reduce the visibility of any pedestrians or cyclists wishing to cross the road.

OTHER ENVIRONMENTAL ISSUES

7.15 In addition to the impact upon pedestrian and cyclist safety, the retention of the site for industrial land uses would have a detrimental effect on the noise and air quality of the surrounding area, including the residential roads that are used to access the strategic road network, including the A305 and A316.

7.16 Furthermore, by removing industrial use from the Greggs site, HGV numbers will be reduced. This meets Richmond's aspirations to reduce the NO_2 emissions in the Richmond Air Quality Management Area (AQMA).

7.17 The removal of the industrial designation of the site would have an impact not just on the physical environment, but also on the amenity of the area. The reduction in noise and deliveries by HGV to the site, particularly at antisocial hours, would have a positive impact on the pleasantness and amenity of the area for surrounding residents. The proximity of the houses to the road, due to the narrow design of the Victorian streets, means that the noise and vibration generated by large vehicles such as HGVs is more intense than in less dense residential areas and the reduction of HGVs would be positive.

SUMMARY

7.18 Based upon the findings in this TS, the Greggs site in Twickenham is considered to be unsuitable for continued and future industrial use for a number of reasons:

- The site and the local highway network was designed in the Victorian era when motor vehicles were not as prevalent and industrial sites were not served by HGVs;
- The site has outgrown its location in terms of the number of trips it generates and the suitability of the highway network for its current uses;
- The local highway network is spatially constrained along straight sections, at corners and at junctions due to the narrow design and a reduced useable width due to on-street parking, and is not suitable for frequent HGV movements;
- The redevelopment of the site for mixed-use purposes would relieve capacity on the local highway network and reduce the level of fear and intimidation experienced by residents, pedestrians and cyclists as a result of frequent HGV movements; and
- A reduction in the quantity of HGVs accessing the site as a result of mixed-use redevelopment would have a positive impact on air quality and noise and would meet Richmond's aspirations to reduce NO_2 emissions in the AQMA.

8 Summary and Conclusion

8.1 JMP Consultants Ltd have been commissioned by Colliers International to provide transport consultancy services for a site located off Gould Road and Edwin Road in the London Borough of Richmond (LBR), with potential for a residential-led mixed-use planning application. The site currently comprises production facilities for Greggs Bakery but is surplus to requirements and therefore is due to be closed. Due to its location embedded in an existing residential area and the constrained nature of the local highway network, the site is not appropriate for an allocation for industrial use or for solely office use, either at the current time or in the future.

8.2 The redevelopment proposals are for the 96 residential units and the provision of 2,757m^2 of commercial start-up space. Car and cycle parking would be provided in line with the London Plan requirements. The vehicular and pedestrian access on Gould Road would be retained, and the principle of access on Edwin Road would be retained but relocated slightly to the east and designed to include access for pedestrians and cyclists.

8.3 The proposed redevelopment would generate approximately 87 trips by light vehicles across both peak periods which, as an average, is equal to less than one vehicle trip each minute across both accesses. While this is an increase in light vehicles compared to the existing use, the change of just over one additional vehicle every two minutes is imperceptible to other road users and local residents. However, the redevelopment of the site would generate 36 fewer HGV movements across the 12 hour period assessed, which due to the vehicles noise and disruption would be a significant improvement for residents.

8.4 With regards to policy, the redevelopment of the site as a mixed-use scheme would support the NPPF and FALP's requirement for developments that generate significant movement, such as those with mixed-uses, to be located where the use of sustainable transport modes can be maximised. The location of the site within a 15 minute walk of Twickenham train station, a key public transport interchange in the area, would better support the significant proportion of trips made by sustainable modes in mixed-use developments, than the more car/HGV dependent trips associated with industrial land uses. FALP also states that developments should not adversely affect safety on the transport network which, should the site be developed for industrial-related employment purposes, is likely to occur due to the unsuitable nature of the local highway network and site access arrangements for HGV movements and the increased number of HGV movements expected for potential future industrial use.

8.5 Following a review of the site's location in the context of the local highway network and the site access arrangements, it is considered that redeveloping the site for industrial purposes would present substandard access for HGVs, which could result in a highway objection on reasons of highway safety. This is a result of both the local highway infrastructure in its current form being unable to sufficiently accommodate significant HGV movements due to considerable on-street parking, and the access arrangements for the site itself from Edwin Road being unsuitable for HGVs.

8.6 Ease of access to sites for HGVs and adequate capacity on the surrounding local highway network are key factors required for industrial land uses to operate efficiently. The constrained access arrangements of the site for HGVs and light vehicles due to the narrow nature of the two-way road and the tight junction radii, and the restrictions imposed by significant on-street parking along these roads, are likely to affect the demand of potential occupiers considering the site.

8.7 Furthermore, its requirement for vehicles to route along a network of residential and narrow two-way local streets to access the wider strategic road network make it unsuitable to be used as a modern industrial site, due to the safety and environmental implications for other road users and local residents. Accessing the site from the wider area requires vehicles to route along roads through residential areas with housing fronting onto both sides of the carriageway. These routes are unsuitable for high volumes

of HGVs due to the detrimental impacts on residents in terms of noise, air quality, safety and overall amenity

8.8 The redevelopment of the site for mixed-use purposes would reduce the volume of traffic, including HGVs, improving the fear and intimidation, safety and amenity for all road users, particularly pedestrians and cyclists. It would also lead to an improvement in air and noise quality for people in the vicinity of the site, and who live along routes to the strategic road network and motorways. A reduction in HGVs would result in a reduction in NO_2 emissions, helping Richmond to achieve its AQMA aspirations.

8.9 Therefore, on transport and highway terms it is considered that the redevelopment of the site as a mixed-use scheme rather than industrial would be beneficial for the local community, local road users and the environment. The proposed redevelopment has been shown to have an imperceptible impact on the local highway network in terms of increase in light vehicle trips and will benefit local residents and other road users by reducing the number of HGV trips.

Appendix A

DEVELOPMENT MASTERPLAN

A1

1:250 @ A1

0 10 M

Site Boundary

Unit Schedule

1 Bed	9 Units
2 Bed	54 Units
3 Bed	15 Units
4 Bed	18 Units
Commercial	2757 sq m
No. of units	96 Units
Density	401 HR/Ha

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AYRE CHAMBERLAIN GAUNT

REV	DATE	NOTES
A	25/2/16	Issue for pre-planning application

DRAWN BY: RA	PROJECT: Gould Road Twickenham
CHECKED BY: GW	DRAWING TITLE: Proposed Site Plan
JOB NO.: 216	
STATUS: PLN	DRAWING NO.: 216_PLN_100 REV: A

Appendix B

PERSONAL INJURY ACCIDENT DATA

Colne Road GIS Area Collisions - 5 years to 30-Nov -2015 (provisional)

Summary of Accidents Selected

Site Reference and Description (zero accident counts shown in bold)	Date Period	Accidents
MD01 GIS AREA B24_Colne_Rd (P)	60 MTS TO NOV-2015	10

The description of how the accident occurred and the contributory factors are the reporting officer's opinion at the time of reporting and may not be the result of extensive investigation

Colne Road GIS Area Collisions - 5 years to 30-Nov -2015 (provisional)

MD01 GIS AREA B24_Colne_Rd (P) — 60 MTS TO NOV-2015 SORTED BY DATE

1 0112TW60058 SAT 28/01/12 13:30 LIGHT HEATH ROAD J/WLONMDON ROAD 24 LINK 104-131 515610 / 173120

POLICE - AT SCENE ROAD-DRY WEATHER-FINE SINGLE CWY T/STAG JUN STOP SIGN NO XING FACILITY IN 50M

PED CROSSED ROAD BETWEEN MOVING TRAFFIC AND WAS HIT BY V1

CASUALTY 001 (001) (? Yrs - M UNKN) SLIGHT PEDESTRIAN UNKNOWN

VEHICLE 001 (000) CAR (56 Yrs - M TW4) GOING AHEAD RIGHT BEND SW TO E JCT MID
BT - DRV NOT CONTACTED FRONT HIT FIRST

C001 A 801 (CROSSED ROAD MASKED BY STATIONARY OR PARKED VEHICLE)
C001 A 803 (FAILED TO JUDGE VEHICLE'S PATH OR SPEED)
C001 A 808 (CARELESS/RECKLESS/IN A HURRY)
V001 A 405 (FAILED TO LOOK PROPERLY)

---

2 0112TW60173 THU 17/05/12 09:40 LIGHT HEATH ROAD/THE GREEN J/W COLNE ROAD 24 LINK 104-131 515580 / 173110

POLICE - AT SCENE ROAD-DRY WEATHER-FINE SINGLE CWY T/STAG JUN GIVE WAY/UNCONT NO XING FACILITY IN 50M

V1 TURNED LEFT ACROSS PATH V2 (CYCLIST) CAUSING A COLLISION & RIDER TO FALL OFF

CASUALTY 001 (002) (36 Yrs - F TW12) SLIGHT DRIVER/RIDER

VEHICLE 001 (002) GDS 3.5-7.5T (42 Yrs - M TW7) TURNING LEFT SW TO NW JCT MID
BT - NOT REQUESTED N/S HIT FIRST

VEHICLE 002 (001) PEDAL CYCLE (36 Yrs - F TW12) GOING AHEAD OTHER SW TO NE JCT MID
BT - NOT APPLICABLE FRONT HIT FIRST

V001 A 403 (POOR TURN OR MANOEUVRE)
V001 A 404 (FAILED TO SIGNAL/ MISLEADING SIGNAL)
V001 A 405 (FAILED TO LOOK PROPERLY)
V001 A 407 (PASSING TOO CLOSE TO CYCLIST, HORSE RIDER OR PEDESTRIAN)

---

3 0112TW60241 SUN 08/07/12 20:11 DARK COLNE ROAD J/W ALBION ROAD 24 CELL 515000/173000 515410 / 173140

POLICE - AT SCENE ROAD-WET WEATHER-FINE SINGLE CWY T/STAG JUN GIVE WAY/UNCONT NO XING FACILITY IN 50M

DRV V1 HAS POOR EYESIGHT & DRV V2 WAS TRAVELLING TO FAST FOR CONDITIONS & BOTH FAILED TO GIVEWAY & COLLIDED

CASUALTY 001 (002) (27 Yrs - M TW3) SLIGHT DRIVER/RIDER

VEHICLE 001 (002) CAR (82 Yrs - M TW2) GOING AHEAD OTHER W TO E JCT MID
BT - NEGATIVE FRONT HIT FIRST

VEHICLE 002 (001) M/C 50-125CC (27 Yrs - M TW3) GOING AHEAD OTHER E TO W JCT MID
BT - NEGATIVE FRONT HIT FIRST

V001 A 504 (UNCORRECTED, DEFECTIVE EYESIGHT)
V001 A 302 (DISOBEYED GIVE WAY OR STOP SIGN OR MARKINGS)
V002 A 307 (TRAVELLING TOO FAST FOR CONDITIONS)
V002 A 302 (DISOBEYED GIVE WAY OR STOP SIGN OR MARKINGS)

Colne Road GIS Area Collisions - 5 years to 30-Nov -2015 (provisional)

MD01 GIS AREA B24_Colne_Rd (P) 60 MTS TO NOV-2015 SORTED BY DATE

4 0112TW60323 FRI 14/09/12 09:08 LIGHT THE GREEN J/W LION ROAD 24 LINK 104-131 515580 / 173110

POLICE - AT SCENE ROAD-DRY WEATHER-FINE SINGLE CWY T/STAG JUN GIVE WAY/UNCONT NO XING FACILITY IN 50M

V1 TURNED AND V2 (CYCLIST) WASNT PAYING ATTENTION AND HIT THE SIDE OF V1

CASUALTY 001 (002) (30 Yrs - M TW12) SLIGHT DRIVER/RIDER

VEHICLE	001 (002)	CAR BT - NOT REQUESTED	(42 Yrs - F TW4)	TURNING LEFT	SW TO NW O/S HIT FIRST	JCT MID
VEHICLE	002 (001)	PEDAL CYCLE BT - NOT APPLICABLE	(30 Yrs - M TW12)	GOING AHEAD OTHER	SW TO NE FRONT HIT FIRST	JCT MID

V002 A 405 (FAILED TO LOOK PROPERLY) V002 A 602 (CARELESS/RECKLESS/IN A HURRY)

---

5 0113TW60114 MON 22/04/13 08:13 LIGHT THE GREEN J/W COLNE ROAD 24 LINK 104-131 515580 / 173110

POLICE - AT SCENE ROAD-DRY WEATHER-FINE SINGLE CWY T/STAG JUN GIVE WAY/UNCONT NO XING FACILITY IN 50M

V2 MAIN ROAD WEST-BD BEGAN TO TURN RIGHT, AS V1 BEGAN AN OVERTAKE

CASUALTY 001 (001) (18 Yrs - M W3) SLIGHT DRIVER/RIDER

VEHICLE	001 (002)	M/C 50-125CC BT - NOT REQUESTED	(18 Yrs - M W3)	OVERTAKE MOVE VEH O/S	NE TO SW FRONT HIT FIRST	JCT MID
VEHICLE	002 (001)	CAR BT - NOT REQUESTED	(32 Yrs - F TW2)	TURNING RIGHT	NE TO NW O/S HIT FIRST	JCT MID

V001 A 406 (FAILED TO JUDGE OTHER PERSON'S PATH OR SPEED) V002 A 405 (FAILED TO LOOK PROPERLY)

Colne Road GIS Area Collisions - 5 years to 30-Nov -2015 (provisional)

MD01 GIS AREA B24_Colne_Rd (P) — 60 MTS TO NOV-2015 SORTED BY DATE

6 0113TW60306 WED 04/09/13 13:32 LIGHT HEATH ROAD J/W HEATH GARDENS 24 LINK 104-131 515620 / 173120

POLICE - AT SCENE ROAD-DRY WEATHER-FINE SINGLE CWY T/STAG JUN GIVE WAY/UNCONT NO XING FACILITY IN 50M

V2 TURNED RIGHT ACROSS PATH OF ONCOMING V1

CASUALTY 001 (002) (32 Yrs - F SW14) SLIGHT DRIVER/RIDER

VEHICLE 001 (002) CAR (68 Yrs - F TW16) TURNING RIGHT W TO S LEAVING MAIN RD
BT - NOT REQUESTED N/S HIT FIRST

VEHICLE 002 (001) PEDAL CYCLE (32 Yrs - F SW14) GOING AHEAD OTHER E TO W JCT APP
BT - NOT APPLICABLE FRONT HIT FIRST

V001 A 405 (FAILED TO LOOK PROPERLY)
V001 B 406 (FAILED TO JUDGE OTHER PERSON'S PATH OR SPEED)
V001 B 701 (VISION AFFECTED - STATIONARY OR PARKED VEHICLE(S))
V002 B 701 (VISION AFFECTED - STATIONARY OR PARKED VEHICLE(S))
V002 A 405 (FAILED TO LOOK PROPERLY)

---

7 0114TW60121 FRI 21/03/14 08:38 LIGHT HEATH ROAD J/W HEATH GARDENS 24 LINK 104-131 515630 / 173110

POLICE - AT SCENE ROAD-DRY WEATHER-FINE SINGLE CWY T/STAG JUN GIVE WAY/UNCONT NO XING FACILITY IN 50M

E/B V1 TURNED RIGHT AS UNIDENT VEH ALSO TURNED RIGHT; V1 COLLIDED WITH PED CAS1 AND PED CAS2

CASUALTY 001 (001) (9 Yrs - M TW1) SLIGHT PEDESTRIAN CROSSING ROAD (NOT ON XING) W BOUND FROM DRIVERS N/SIDE
JOURNEY TO/FROM SCHOOL Sch Attended : N/K

CASUALTY 002 (001) (7 Yrs - M TW1) SLIGHT PEDESTRIAN CROSSING ROAD (NOT ON XING) W BOUND FROM DRIVERS N/SIDE
JOURNEY TO/FROM SCHOOL Sch Attended : N/K

VEHICLE 001 (000) CAR (34 Yrs - F TW2) TURNING RIGHT W TO SE JCT MID
BT - NEGATIVE FRONT HIT FIRST

C001 B 802 (FAILED TO LOOK PROPERLY)
C001 B 803 (FAILED TO JUDGE VEHICLE'S PATH OR SPEED)
C002 B 802 (FAILED TO LOOK PROPERLY)
C002 B 803 (FAILED TO JUDGE VEHICLE'S PATH OR SPEED)

Colne Road GIS Area Collisions - 5 years to 30-Nov -2015 (provisional)

MD01 GIS AREA B24_Colne_Rd (P) 60 MTS TO NOV-2015 SORTED BY DATE

8 0114TW60239 THU 29/05/14 13:49 LIGHT NFL: THE GREEN 26M W J/W HEATH GARDENS 24 LINK 104-131 515600 / 173110

POLICE - AT SCENE ROAD-DRY WEATHER-FINE SINGLE CWY NO JUN IN 20M NO XING FACILITY IN 50M

W/B V1 PASSED PARKED V2 AND WAS STRUCK BY V2 CAB DOOR SWINGING OPEN INTO HER FACE

CASUALTY 001 (001) (43 Yrs - F TW10) SERIOUS DRIVER/RIDER

VEHICLE	001 (002)	PEDAL CYCLE (43 Yrs - F TW10) BT - NOT APPLICABLE	OVERTAKE STAT VEH O/S HIT PARKED VEH	E TO W FRONT HIT FIRST	COMM TO/FROM WORK
VEHICLE	002 (001)	GDS => 7.5T (36 Yrs - M SL1) BT - NEGATIVE	PARKED	P TO P O/S HIT FIRST	JNY PART OF WORK

V002 B 405 (FAILED TO LOOK PROPERLY)
V002 A 904 (VEHICLE DOOR OPENED OR CLOSED NEGLIGENTLY)
V001 B 403 (POOR TURN OR MANOEUVRE)

---

9 0114TW60434 SAT 04/10/14 12:19 LIGHT HEATH ROAD J/W LION ROAD 24 LINK 104-131 515610 / 173120

POLICE - AT SCENE ROAD-WET RAINING SINGLE CWY T/STAG JUN GIVE WAY/UNCONT NO XING FACILITY IN 50M

E/B V1 CYCLED ON N/S OF VEHICLES, APPROACHED GAP ; W/B V2 TURNED RIGHT INTO GAP, COLLIDED V1

CASUALTY 001 (001) (43 Yrs - M SW15) SLIGHT DRIVER/RIDER

VEHICLE	001 (002)	PEDAL CYCLE (43 Yrs - M SW15) BT - NOT APPLICABLE	OVERTAKING NEARSIDE	W TO E FRONT HIT FIRST	JCT MID
VEHICLE	002 (001)	CAR (? Yrs - F 1) BT - DRV NOT CONTACTED	TURNING RIGHT	E TO N N/S HIT FIRST	JCT MID

V001 A 405 (FAILED TO LOOK PROPERLY)
V002 A 406 (FAILED TO JUDGE OTHER PERSON'S PATH OR SPEED)
V002 A 403 (POOR TURN OR MANOEUVRE)

Colne Road GIS Area Collisions - 5 years to 30-Nov -2015 (provisional)

MD01 GIS AREA B24_Colne_Rd (P) 60 MTS TO NOV-2015 SORTED BY DATE

10 0115TW60256 FRI 31/07/15 21:40 DARK HEATH ROAD J/W LION ROAD 24 LINK 104-131 515610 / 173120

POLICE - AT SCENE ROAD-DRY WEATHER-FINE SINGLE CWY T/STAG JUN GIVE WAY/UNCONT NO XING FACILITY IN 50M

W/B V2 TURNED RIGHT; E/B V1 BRAKED TO AVOID BUT COLLIDED

CASUALTY 001 (001) (19 Yrs - M TW2) SLIGHT DRIVER/RIDER

VEHICLE 001 (002) CAR (19 Yrs - M TW2) TURNING RIGHT E TO N JCT MID
BT - NOT REQUESTED N/S HIT FIRST

VEHICLE 002 (001) M/C <= 50CC (57 Yrs - M TW13) GOING AHEAD OTHER W TO E PUPIL RIDING TO/FROM SCH JCT MID
BT - NEGATIVE FRONT HIT FIRST

V002 A 403 (POOR TURN OR MANOEUVRE) V002 A 405 (FAILED TO LOOK PROPERLY)

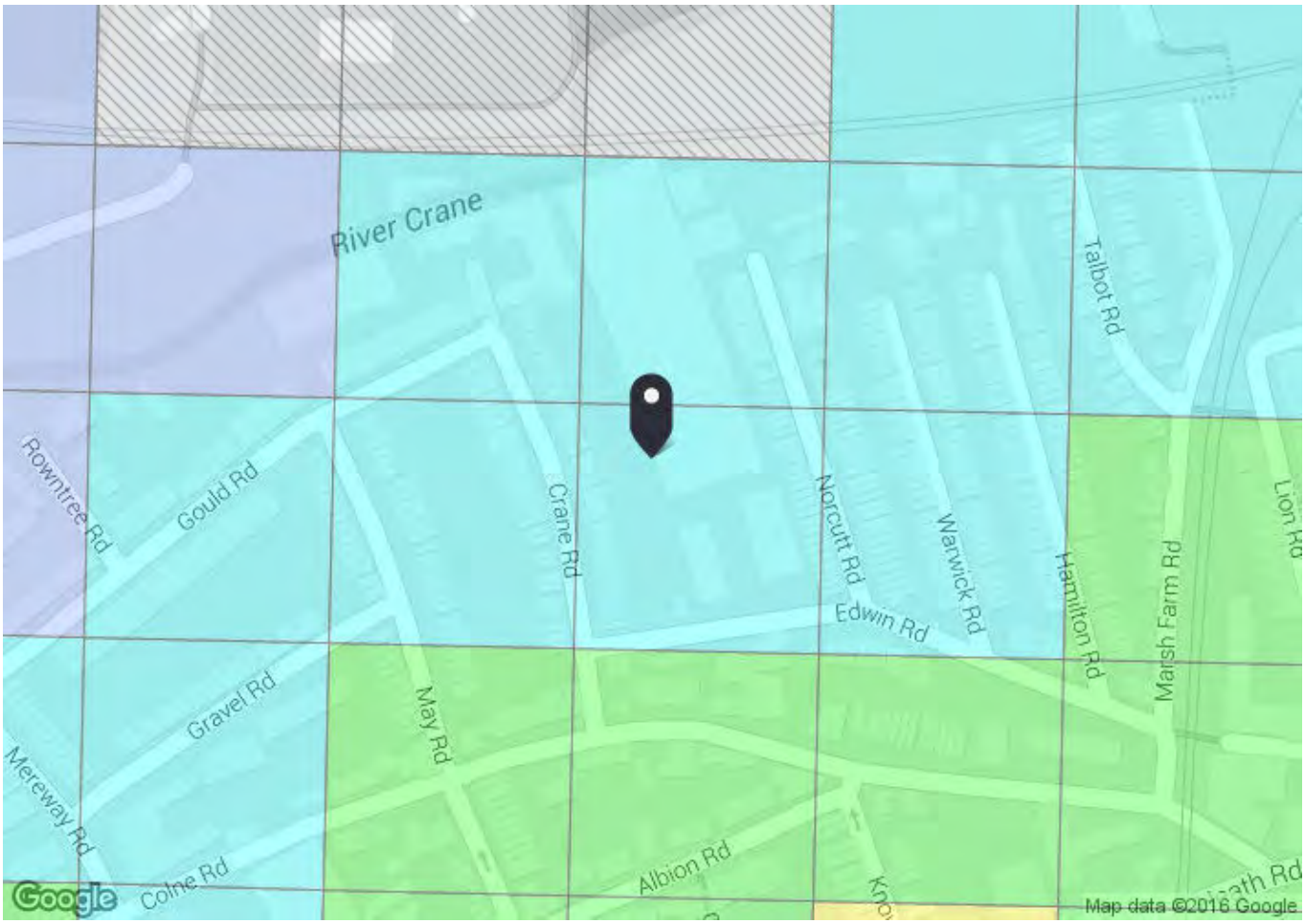
End of Accidents for MD01 GIS AREA B24_Colne_Rd (P)

End of Report

Appendix C

PTAL REPORT

TRANSPORT FOR LONDON



PTAL output for 2011 (Base year)
2

30 Crane Rd, Twickenham, Greater London TW2 6RY, UK

Easting: 515327, Northing: 173272

Grid Cell: 45397

Report generated: 19/04/2016

Map key - PTAL

0 (Worst)	1a
1b	2
3	4
5	6a
6b (Best)	

Map layers

PTAL (cell size: 100m)

Calculation Parameters

Day of Week	M-F
Time Period	AM Peak
Walk Speed	4.8 kph
Bus Node Max. Walk Access Time (mins)	8
Bus Reliability Factor	2.0
LU Station Max. Walk Access Time (mins)	12
LU Reliability Factor	0.75
National Rail Station Max. Walk Access Time (mins)	12
National Rail Reliability Factor	0.75

Calculation data

Mode	Stop	Route	Distance (metres)	Frequency(vph)	Walk Time (mins)	SWT (mins)	TAT (mins)	EDF	Weight	AI
Bus	TWICKENHAM GREEN	290	452.01	3	5.65	12	17.65	1.7	0.5	0.85
Bus	TWICKENHAM GREEN	281	452.01	7.5	5.65	6	11.65	2.58	1	2.58
Bus	TWICKENHAM GREEN	R70	452.01	6	5.65	7	12.65	2.37	0.5	1.19
Bus	TWICKENHAM GREEN	267	452.01	6	5.65	7	12.65	2.37	0.5	1.19
Bus	TWICKENHAM GREEN	110	404.43	3	5.06	12	17.06	1.76	0.5	0.88
Bus	TWICKENHAM GREEN	490	404.43	5	5.06	8	13.06	2.3	0.5	1.15
Bus	TWICKENHAM GREEN	H22	404.43	5	5.06	8	13.06	2.3	0.5	1.15
									Total Grid Cell AI:	**8.97**

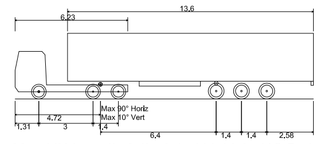
Appendix D

SWEPT PATH ANALYSIS

Max UK Length Articulated Vehicle (16.5m) Entering Site

Max UK Length Articulated Vehicle (16.5m) Exiting Site

Notes



Max UK Length Articulated Vehicle (16.5m)	
Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.632m
Min Body Ground Clearance	0.396m
Max Track Width	2.500m
Lock to Lock Time	6.00s
Kerb to Kerb Turning Radius	6.870m

Rev.	Date	Revision details	Drawn	Checked	Approved

27-32 Old Jewry
London
EC2R 8DQ

T 020 3714 4400
E london@jmp.co.uk
W www.jmp.co.uk

Client

Greggs plc

Project

Gould Road, Twickenham

Title

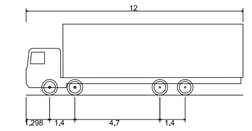
**Swept Path Analysis
at Edwin Road
Sheet 1 of 2**

Drawn	Checked	Approved
RM	JC	RS
Original drg. size: A1	Date: 15/04/2016	Scale: 1:500
Drawing Status: Information	Drawing Number: ST17096-01	Rev.: -

Rigid Truck Entering Site

Rigid Truck Exiting Site

Notes



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
Kerb to Kerb Turning Radius	11.900m

Rev.	Date	Revision details	Drawn	Checked	Approved

27-32 Old Jewry
London
EC2R 8DQ

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Client

Greggs plc

Project

Gould Road, Twickenham

Title

Swept Path Analysis at Edwin Road Sheet 2 of 2

Drawn	Checked	Approved
RM	JC	RS
Original drg. size: A1	Date: 15/04/2016	Scale: 1:500
Drawing Status: Information	Drawing Number: ST17096-02	Rev.: -

Appendix E

TRICS OUTPUTS

Calculation Reference: AUDIT-846402-160405-0415

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
Category : C - INDUSTRIAL UNIT
MULTI-MODAL VEHICLES

Selected regions and areas:
01 GREATER LONDON
BT BRENT 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: Gross floor area
Actual Range: 6100 to 6100 (units: sqm)
Range Selected by User: 620 to 6100 (units: sqm)

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/08 to 10/09/14

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:
Wednesday 1 days

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

Selected survey types:
Manual count 1 days
Directional ATC Count 0 days

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

Selected Locations:
Suburban Area (PPS6 Out of Centre) 1

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

Selected Location Sub Categories:
Industrial Zone 1

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

Filtering Stage 3 selection:

Use Class:
B2 1 days

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

Filtering Stage 3 selection (Cont.):

Population within 1 mile:
50,001 to 100,000 1 days

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

Population within 5 miles:
500,001 or More 1 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

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

Travel Plan:
No 1 days

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

LIST OF SITES relevant to selection parameters

1 BT-02-C-02 FOOD PRODUCTION BRENT
ABBEYDALE ROAD

ALPERTON
Suburban Area (PPS6 Out of Centre)
Industrial Zone
Total Gross floor area: 6100 sqm
Survey date: WEDNESDAY *10/09/14* *Survey Type: MANUAL*

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

TRIP RATE for Land Use 02 - EMPLOYMENT/C - INDUSTRIAL UNIT

MULTI-MODAL VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30	1	6100	0.082	1	6100	0.000	1	6100	0.082
06:30 - 07:00	**1**	**6100**	**0.361**	1	6100	0.164	**1**	**6100**	**0.525**
07:00 - 07:30	1	6100	0.115	1	6100	0.098	1	6100	0.213
07:30 - 08:00	1	6100	0.082	1	6100	0.049	1	6100	0.131
08:00 - 08:30	1	6100	0.033	1	6100	0.049	1	6100	0.082
08:30 - 09:00	1	6100	0.082	1	6100	0.049	1	6100	0.131
09:00 - 09:30	1	6100	0.066	1	6100	0.066	1	6100	0.132
09:30 - 10:00	1	6100	0.066	1	6100	0.016	1	6100	0.082
10:00 - 10:30	1	6100	0.098	1	6100	0.115	1	6100	0.213
10:30 - 11:00	1	6100	0.066	1	6100	0.098	1	6100	0.164
11:00 - 11:30	1	6100	0.082	1	6100	0.033	1	6100	0.115
11:30 - 12:00	1	6100	0.033	1	6100	0.082	1	6100	0.115
12:00 - 12:30	1	6100	0.033	1	6100	0.016	1	6100	0.049
12:30 - 13:00	1	6100	0.000	1	6100	0.049	1	6100	0.049
13:00 - 13:30	1	6100	0.033	1	6100	0.049	1	6100	0.082
13:30 - 14:00	1	6100	0.082	1	6100	0.049	1	6100	0.131
14:00 - 14:30	1	6100	0.016	1	6100	0.066	1	6100	0.082
14:30 - 15:00	1	6100	0.082	1	6100	0.066	1	6100	0.148
15:00 - 15:30	1	6100	0.066	1	6100	0.049	1	6100	0.115
15:30 - 16:00	1	6100	0.049	1	6100	0.016	1	6100	0.065
16:00 - 16:30	1	6100	0.098	1	6100	0.066	1	6100	0.164
16:30 - 17:00	1	6100	0.197	1	6100	0.049	1	6100	0.246
17:00 - 17:30	1	6100	0.131	**1**	**6100**	**0.328**	1	6100	0.459
17:30 - 18:00	1	6100	0.016	1	6100	0.066	1	6100	0.082
18:00 - 18:30									
18:30 - 19:00									
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			1.969			1.688			3.657

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

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

Parameter summary

Trip rate parameter range selected:	6100 - 6100 (units: sqm)
Survey date date range:	01/01/08 - 10/09/14
Number of weekdays (Monday-Friday):	1
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	0

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

TRIP RATE for Land Use 02 - EMPLOYMENT/C - INDUSTRIAL UNIT

MULTI-MODAL TAXIS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30	1	6100	0.000	1	6100	0.000	1	6100	0.000
06:30 - 07:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
07:00 - 07:30	1	6100	0.000	1	6100	0.000	1	6100	0.000
07:30 - 08:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
08:00 - 08:30	1	6100	0.000	1	6100	0.000	1	6100	0.000
08:30 - 09:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
09:00 - 09:30	1	6100	0.000	1	6100	0.000	1	6100	0.000
09:30 - 10:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
10:00 - 10:30	1	6100	0.000	1	6100	0.000	1	6100	0.000
10:30 - 11:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
11:00 - 11:30	1	6100	0.000	1	6100	0.000	1	6100	0.000
11:30 - 12:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
12:00 - 12:30	1	6100	0.000	1	6100	0.000	1	6100	0.000
12:30 - 13:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
13:00 - 13:30	1	6100	0.000	1	6100	0.000	1	6100	0.000
13:30 - 14:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
14:00 - 14:30	1	6100	0.000	1	6100	0.000	1	6100	0.000
14:30 - 15:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
15:00 - 15:30	1	6100	0.000	1	6100	0.000	1	6100	0.000
15:30 - 16:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
16:00 - 16:30	1	6100	0.000	1	6100	0.000	1	6100	0.000
16:30 - 17:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
17:00 - 17:30	**1**	**6100**	**0.016**	**1**	**6100**	**0.016**	**1**	**6100**	**0.032**
17:30 - 18:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
18:00 - 18:30									
18:30 - 19:00									
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.016			0.016			0.032

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

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

Parameter summary

Trip rate parameter range selected:	6100 - 6100 (units: sqm)
Survey date date range:	01/01/08 - 10/09/14
Number of weekdays (Monday-Friday):	1
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	0

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

TRIP RATE for Land Use 02 - EMPLOYMENT/C - INDUSTRIAL UNIT
MULTI-MODAL OGVS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30	1	6100	0.016	1	6100	0.000	1	6100	0.016
06:30 - 07:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
07:00 - 07:30	1	6100	0.016	1	6100	0.016	1	6100	0.032
07:30 - 08:00	1	6100	0.033	1	6100	0.016	1	6100	0.049
08:00 - 08:30	1	6100	0.016	1	6100	0.033	1	6100	0.049
08:30 - 09:00	1	6100	0.000	1	6100	0.016	1	6100	0.016
09:00 - 09:30	1	6100	0.033	1	6100	0.016	1	6100	0.049
09:30 - 10:00	1	6100	0.033	1	6100	0.016	1	6100	0.049
10:00 - 10:30	1	6100	0.016	**1**	**6100**	**0.066**	1	6100	0.082
10:30 - 11:00	1	6100	0.049	1	6100	0.049	1	6100	0.098
11:00 - 11:30	1	6100	0.033	1	6100	0.016	1	6100	0.049
11:30 - 12:00	1	6100	0.033	1	6100	0.049	1	6100	0.082
12:00 - 12:30	1	6100	0.016	1	6100	0.000	1	6100	0.016
12:30 - 13:00	1	6100	0.000	1	6100	0.033	1	6100	0.033
13:00 - 13:30	1	6100	0.033	1	6100	0.000	1	6100	0.033
13:30 - 14:00	1	6100	0.033	1	6100	0.033	1	6100	0.066
14:00 - 14:30	1	6100	0.000	1	6100	0.049	1	6100	0.049
14:30 - 15:00	**1**	**6100**	**0.066**	1	6100	0.049	**1**	**6100**	**0.115**
15:00 - 15:30	1	6100	0.000	1	6100	0.016	1	6100	0.016
15:30 - 16:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
16:00 - 16:30	1	6100	0.016	1	6100	0.000	1	6100	0.016
16:30 - 17:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
17:00 - 17:30	1	6100	0.000	1	6100	0.000	1	6100	0.000
17:30 - 18:00	1	6100	0.016	1	6100	0.000	1	6100	0.016
18:00 - 18:30									
18:30 - 19:00									
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.458			0.473			0.931

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

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

Parameter summary

Trip rate parameter range selected:	6100 - 6100 (units: sqm)
Survey date date range:	01/01/08 - 10/09/14
Number of weekdays (Monday-Friday):	1
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	0

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

TRIP RATE for Land Use 02 - EMPLOYMENT/C - INDUSTRIAL UNIT

MULTI-MODAL PSVS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30	1	6100	0.000	1	6100	0.000	1	6100	0.000
06:30 - 07:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
07:00 - 07:30	1	6100	0.000	1	6100	0.000	1	6100	0.000
07:30 - 08:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
08:00 - 08:30	1	6100	0.000	1	6100	0.000	1	6100	0.000
08:30 - 09:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
09:00 - 09:30	1	6100	0.000	1	6100	0.000	1	6100	0.000
09:30 - 10:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
10:00 - 10:30	1	6100	0.000	1	6100	0.000	1	6100	0.000
10:30 - 11:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
11:00 - 11:30	1	6100	0.000	1	6100	0.000	1	6100	0.000
11:30 - 12:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
12:00 - 12:30	1	6100	0.000	1	6100	0.000	1	6100	0.000
12:30 - 13:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
13:00 - 13:30	1	6100	0.000	1	6100	0.000	1	6100	0.000
13:30 - 14:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
14:00 - 14:30	1	6100	0.000	1	6100	0.000	1	6100	0.000
14:30 - 15:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
15:00 - 15:30	1	6100	0.000	1	6100	0.000	1	6100	0.000
15:30 - 16:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
16:00 - 16:30	1	6100	0.000	1	6100	0.000	1	6100	0.000
16:30 - 17:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
17:00 - 17:30	1	6100	0.000	1	6100	0.000	1	6100	0.000
17:30 - 18:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
18:00 - 18:30									
18:30 - 19:00									
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.000			0.000			0.000

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

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

Parameter summary

Trip rate parameter range selected:	6100 - 6100 (units: sqm)
Survey date date range:	01/01/08 - 10/09/14
Number of weekdays (Monday-Friday):	1
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	0

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

TRIP RATE for Land Use 02 - EMPLOYMENT/C - INDUSTRIAL UNIT

MULTI-MODAL CYCLISTS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30	1	6100	0.000	1	6100	0.000	1	6100	0.000
06:30 - 07:00	**1**	**6100**	**0.098**	1	6100	0.000	1	6100	0.098
07:00 - 07:30	1	6100	0.000	1	6100	0.000	1	6100	0.000
07:30 - 08:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
08:00 - 08:30	1	6100	0.000	1	6100	0.000	1	6100	0.000
08:30 - 09:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
09:00 - 09:30	1	6100	0.000	1	6100	0.000	1	6100	0.000
09:30 - 10:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
10:00 - 10:30	1	6100	0.000	1	6100	0.016	1	6100	0.016
10:30 - 11:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
11:00 - 11:30	1	6100	0.000	1	6100	0.000	1	6100	0.000
11:30 - 12:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
12:00 - 12:30	1	6100	0.000	1	6100	0.000	1	6100	0.000
12:30 - 13:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
13:00 - 13:30	1	6100	0.000	1	6100	0.000	1	6100	0.000
13:30 - 14:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
14:00 - 14:30	1	6100	0.000	1	6100	0.000	1	6100	0.000
14:30 - 15:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
15:00 - 15:30	1	6100	0.000	1	6100	0.016	1	6100	0.016
15:30 - 16:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
16:00 - 16:30	1	6100	0.016	1	6100	0.000	1	6100	0.016
16:30 - 17:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
17:00 - 17:30	1	6100	0.016	**1**	**6100**	**0.098**	**1**	**6100**	**0.114**
17:30 - 18:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
18:00 - 18:30									
18:30 - 19:00									
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.130			0.130			0.260

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

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

Parameter summary

Trip rate parameter range selected:	6100 - 6100 (units: sqm)
Survey date date range:	01/01/08 - 10/09/14
Number of weekdays (Monday-Friday):	1
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	0

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

TRIP RATE for Land Use 02 - EMPLOYMENT/C - INDUSTRIAL UNIT

MULTI-MODAL VEHICLE OCCUPANTS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30	1	6100	0.131	1	6100	0.000	1	6100	0.131
06:30 - 07:00	**1**	**6100**	**0.492**	1	6100	0.000	**1**	**6100**	**0.492**
07:00 - 07:30	1	6100	0.115	1	6100	0.148	1	6100	0.263
07:30 - 08:00	1	6100	0.098	1	6100	0.049	1	6100	0.147
08:00 - 08:30	1	6100	0.033	1	6100	0.049	1	6100	0.082
08:30 - 09:00	1	6100	0.082	1	6100	0.016	1	6100	0.098
09:00 - 09:30	1	6100	0.082	1	6100	0.082	1	6100	0.164
09:30 - 10:00	1	6100	0.082	1	6100	0.016	1	6100	0.098
10:00 - 10:30	1	6100	0.131	1	6100	0.115	1	6100	0.246
10:30 - 11:00	1	6100	0.066	1	6100	0.115	1	6100	0.181
11:00 - 11:30	1	6100	0.082	1	6100	0.033	1	6100	0.115
11:30 - 12:00	1	6100	0.033	1	6100	0.098	1	6100	0.131
12:00 - 12:30	1	6100	0.033	1	6100	0.016	1	6100	0.049
12:30 - 13:00	1	6100	0.000	1	6100	0.066	1	6100	0.066
13:00 - 13:30	1	6100	0.033	1	6100	0.082	1	6100	0.115
13:30 - 14:00	1	6100	0.082	1	6100	0.049	1	6100	0.131
14:00 - 14:30	1	6100	0.016	1	6100	0.066	1	6100	0.082
14:30 - 15:00	1	6100	0.098	1	6100	0.098	1	6100	0.196
15:00 - 15:30	1	6100	0.082	1	6100	0.049	1	6100	0.131
15:30 - 16:00	1	6100	0.066	1	6100	0.016	1	6100	0.082
16:00 - 16:30	1	6100	0.164	1	6100	0.082	1	6100	0.246
16:30 - 17:00	1	6100	0.230	1	6100	0.049	1	6100	0.279
17:00 - 17:30	1	6100	0.016	**1**	**6100**	**0.443**	1	6100	0.459
17:30 - 18:00	1	6100	0.016	1	6100	0.131	1	6100	0.147
18:00 - 18:30									
18:30 - 19:00									
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			2.263			1.868			4.131

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

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

Parameter summary

Trip rate parameter range selected:	6100 - 6100 (units: sqm)
Survey date date range:	01/01/08 - 10/09/14
Number of weekdays (Monday-Friday):	1
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	0

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

TRIP RATE for Land Use 02 - EMPLOYMENT/C - INDUSTRIAL UNIT

MULTI-MODAL PEDESTRIANS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30	1	6100	0.164	1	6100	0.000	1	6100	0.164
06:30 - 07:00	**1**	**6100**	**1.295**	1	6100	0.098	1	6100	1.393
07:00 - 07:30	1	6100	0.033	1	6100	0.049	1	6100	0.082
07:30 - 08:00	1	6100	0.033	1	6100	0.000	1	6100	0.033
08:00 - 08:30	1	6100	0.000	1	6100	0.000	1	6100	0.000
08:30 - 09:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
09:00 - 09:30	1	6100	0.000	1	6100	0.000	1	6100	0.000
09:30 - 10:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
10:00 - 10:30	1	6100	0.049	1	6100	0.033	1	6100	0.082
10:30 - 11:00	1	6100	0.033	1	6100	0.000	1	6100	0.033
11:00 - 11:30	1	6100	0.115	1	6100	0.082	1	6100	0.197
11:30 - 12:00	1	6100	0.066	1	6100	0.016	1	6100	0.082
12:00 - 12:30	1	6100	0.016	1	6100	0.016	1	6100	0.032
12:30 - 13:00	1	6100	0.033	1	6100	0.049	1	6100	0.082
13:00 - 13:30	1	6100	0.000	1	6100	0.049	1	6100	0.049
13:30 - 14:00	1	6100	0.066	1	6100	0.000	1	6100	0.066
14:00 - 14:30	1	6100	0.033	1	6100	0.000	1	6100	0.033
14:30 - 15:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
15:00 - 15:30	1	6100	0.066	1	6100	0.016	1	6100	0.082
15:30 - 16:00	1	6100	0.082	1	6100	0.033	1	6100	0.115
16:00 - 16:30	1	6100	0.328	1	6100	0.016	1	6100	0.344
16:30 - 17:00	1	6100	1.033	1	6100	0.033	1	6100	1.066
17:00 - 17:30	1	6100	0.016	**1**	**6100**	**1.918**	**1**	**6100**	**1.934**
17:30 - 18:00	1	6100	0.000	1	6100	0.033	1	6100	0.033
18:00 - 18:30									
18:30 - 19:00									
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			3.461			2.441			5.902

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

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

Parameter summary

Trip rate parameter range selected:	6100 - 6100 (units: sqm)
Survey date date range:	01/01/08 - 10/09/14
Number of weekdays (Monday-Friday):	1
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	0

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

TRIP RATE for Land Use 02 - EMPLOYMENT/C - INDUSTRIAL UNIT

MULTI-MODAL BUS/TRAM PASSENGERS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30	1	6100	0.148	1	6100	0.000	1	6100	0.148
06:30 - 07:00	**1**	**6100**	**0.279**	1	6100	0.000	1	6100	0.279
07:00 - 07:30	1	6100	0.033	1	6100	0.000	1	6100	0.033
07:30 - 08:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
08:00 - 08:30	1	6100	0.000	1	6100	0.000	1	6100	0.000
08:30 - 09:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
09:00 - 09:30	1	6100	0.000	1	6100	0.000	1	6100	0.000
09:30 - 10:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
10:00 - 10:30	1	6100	0.000	1	6100	0.000	1	6100	0.000
10:30 - 11:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
11:00 - 11:30	1	6100	0.000	1	6100	0.000	1	6100	0.000
11:30 - 12:00	1	6100	0.016	1	6100	0.000	1	6100	0.016
12:00 - 12:30	1	6100	0.016	1	6100	0.000	1	6100	0.016
12:30 - 13:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
13:00 - 13:30	1	6100	0.000	1	6100	0.000	1	6100	0.000
13:30 - 14:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
14:00 - 14:30	1	6100	0.000	1	6100	0.000	1	6100	0.000
14:30 - 15:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
15:00 - 15:30	1	6100	0.000	1	6100	0.016	1	6100	0.016
15:30 - 16:00	1	6100	0.000	1	6100	0.033	1	6100	0.033
16:00 - 16:30	1	6100	0.049	1	6100	0.000	1	6100	0.049
16:30 - 17:00	1	6100	0.049	1	6100	0.000	1	6100	0.049
17:00 - 17:30	1	6100	0.000	**1**	**6100**	**0.574**	**1**	**6100**	**0.574**
17:30 - 18:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
18:00 - 18:30									
18:30 - 19:00									
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.590			0.623			1.213

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

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

Parameter summary

Trip rate parameter range selected:	6100 - 6100 (units: sqm)
Survey date date range:	01/01/08 - 10/09/14
Number of weekdays (Monday-Friday):	1
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	0

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

TRIP RATE for Land Use 02 - EMPLOYMENT/C - INDUSTRIAL UNIT

MULTI-MODAL TOTAL RAIL PASSENGERS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30	**1**	**6100**	**0.033**	1	6100	0.000	1	6100	0.033
06:30 - 07:00	1	6100	0.033	1	6100	0.000	1	6100	0.033
07:00 - 07:30	1	6100	0.033	1	6100	0.016	1	6100	0.049
07:30 - 08:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
08:00 - 08:30	1	6100	0.000	1	6100	0.000	1	6100	0.000
08:30 - 09:00	1	6100	0.016	1	6100	0.000	1	6100	0.016
09:00 - 09:30	1	6100	0.000	1	6100	0.000	1	6100	0.000
09:30 - 10:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
10:00 - 10:30	1	6100	0.000	1	6100	0.000	1	6100	0.000
10:30 - 11:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
11:00 - 11:30	1	6100	0.000	1	6100	0.000	1	6100	0.000
11:30 - 12:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
12:00 - 12:30	1	6100	0.016	1	6100	0.000	1	6100	0.016
12:30 - 13:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
13:00 - 13:30	1	6100	0.000	1	6100	0.016	1	6100	0.016
13:30 - 14:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
14:00 - 14:30	1	6100	0.000	1	6100	0.000	1	6100	0.000
14:30 - 15:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
15:00 - 15:30	1	6100	0.000	1	6100	0.000	1	6100	0.000
15:30 - 16:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
16:00 - 16:30	1	6100	0.000	1	6100	0.000	1	6100	0.000
16:30 - 17:00	1	6100	0.016	1	6100	0.000	1	6100	0.016
17:00 - 17:30	1	6100	0.000	**1**	**6100**	**0.115**	**1**	**6100**	**0.115**
17:30 - 18:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
18:00 - 18:30									
18:30 - 19:00									
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.147			0.147			0.294

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

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

Parameter summary

Trip rate parameter range selected:	6100 - 6100 (units: sqm)
Survey date date range:	01/01/08 - 10/09/14
Number of weekdays (Monday-Friday):	1
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	0

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

TRIP RATE for Land Use 02 - EMPLOYMENT/C - INDUSTRIAL UNIT

MULTI-MODAL COACH PASSENGERS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30	1	6100	0.000	1	6100	0.000	1	6100	0.000
06:30 - 07:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
07:00 - 07:30	1	6100	0.000	1	6100	0.000	1	6100	0.000
07:30 - 08:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
08:00 - 08:30	1	6100	0.000	1	6100	0.000	1	6100	0.000
08:30 - 09:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
09:00 - 09:30	1	6100	0.000	1	6100	0.000	1	6100	0.000
09:30 - 10:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
10:00 - 10:30	1	6100	0.000	1	6100	0.000	1	6100	0.000
10:30 - 11:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
11:00 - 11:30	1	6100	0.000	1	6100	0.000	1	6100	0.000
11:30 - 12:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
12:00 - 12:30	1	6100	0.000	1	6100	0.000	1	6100	0.000
12:30 - 13:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
13:00 - 13:30	1	6100	0.000	1	6100	0.000	1	6100	0.000
13:30 - 14:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
14:00 - 14:30	1	6100	0.000	1	6100	0.000	1	6100	0.000
14:30 - 15:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
15:00 - 15:30	1	6100	0.000	1	6100	0.000	1	6100	0.000
15:30 - 16:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
16:00 - 16:30	1	6100	0.000	1	6100	0.000	1	6100	0.000
16:30 - 17:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
17:00 - 17:30	1	6100	0.000	1	6100	0.000	1	6100	0.000
17:30 - 18:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
18:00 - 18:30									
18:30 - 19:00									
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.000			0.000			0.000

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

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

Parameter summary

Trip rate parameter range selected:	6100 - 6100 (units: sqm)
Survey date date range:	01/01/08 - 10/09/14
Number of weekdays (Monday-Friday):	1
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	0

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

TRIP RATE for Land Use 02 - EMPLOYMENT/C - INDUSTRIAL UNIT

MULTI-MODAL PUBLIC TRANSPORT USERS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30	1	6100	0.180	1	6100	0.000	1	6100	0.180
06:30 - 07:00	**1**	**6100**	**0.311**	1	6100	0.000	1	6100	0.311
07:00 - 07:30	1	6100	0.066	1	6100	0.016	1	6100	0.082
07:30 - 08:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
08:00 - 08:30	1	6100	0.000	1	6100	0.000	1	6100	0.000
08:30 - 09:00	1	6100	0.016	1	6100	0.000	1	6100	0.016
09:00 - 09:30	1	6100	0.000	1	6100	0.000	1	6100	0.000
09:30 - 10:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
10:00 - 10:30	1	6100	0.000	1	6100	0.000	1	6100	0.000
10:30 - 11:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
11:00 - 11:30	1	6100	0.000	1	6100	0.000	1	6100	0.000
11:30 - 12:00	1	6100	0.016	1	6100	0.000	1	6100	0.016
12:00 - 12:30	1	6100	0.033	1	6100	0.000	1	6100	0.033
12:30 - 13:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
13:00 - 13:30	1	6100	0.000	1	6100	0.016	1	6100	0.016
13:30 - 14:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
14:00 - 14:30	1	6100	0.000	1	6100	0.000	1	6100	0.000
14:30 - 15:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
15:00 - 15:30	1	6100	0.000	1	6100	0.016	1	6100	0.016
15:30 - 16:00	1	6100	0.000	1	6100	0.033	1	6100	0.033
16:00 - 16:30	1	6100	0.049	1	6100	0.000	1	6100	0.049
16:30 - 17:00	1	6100	0.066	1	6100	0.000	1	6100	0.066
17:00 - 17:30	1	6100	0.000	**1**	**6100**	**0.689**	**1**	**6100**	**0.689**
17:30 - 18:00	1	6100	0.000	1	6100	0.000	1	6100	0.000
18:00 - 18:30									
18:30 - 19:00									
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.737			0.770			1.507

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

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

Parameter summary

Trip rate parameter range selected:	6100 - 6100 (units: sqm)
Survey date date range:	01/01/08 - 10/09/14
Number of weekdays (Monday-Friday):	1
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	0

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

TRIP RATE for Land Use 02 - EMPLOYMENT/C - INDUSTRIAL UNIT

MULTI-MODAL TOTAL PEOPLE

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30	1	6100	0.475	1	6100	0.000	1	6100	0.475
06:30 - 07:00	**1**	**6100**	**2.197**	1	6100	0.098	1	6100	2.295
07:00 - 07:30	1	6100	0.213	1	6100	0.213	1	6100	0.426
07:30 - 08:00	1	6100	0.131	1	6100	0.049	1	6100	0.180
08:00 - 08:30	1	6100	0.033	1	6100	0.049	1	6100	0.082
08:30 - 09:00	1	6100	0.098	1	6100	0.016	1	6100	0.114
09:00 - 09:30	1	6100	0.082	1	6100	0.082	1	6100	0.164
09:30 - 10:00	1	6100	0.082	1	6100	0.016	1	6100	0.098
10:00 - 10:30	1	6100	0.180	1	6100	0.164	1	6100	0.344
10:30 - 11:00	1	6100	0.098	1	6100	0.115	1	6100	0.213
11:00 - 11:30	1	6100	0.197	1	6100	0.115	1	6100	0.312
11:30 - 12:00	1	6100	0.115	1	6100	0.115	1	6100	0.230
12:00 - 12:30	1	6100	0.082	1	6100	0.033	1	6100	0.115
12:30 - 13:00	1	6100	0.033	1	6100	0.115	1	6100	0.148
13:00 - 13:30	1	6100	0.033	1	6100	0.148	1	6100	0.181
13:30 - 14:00	1	6100	0.148	1	6100	0.049	1	6100	0.197
14:00 - 14:30	1	6100	0.049	1	6100	0.066	1	6100	0.115
14:30 - 15:00	1	6100	0.098	1	6100	0.098	1	6100	0.196
15:00 - 15:30	1	6100	0.148	1	6100	0.098	1	6100	0.246
15:30 - 16:00	1	6100	0.148	1	6100	0.082	1	6100	0.230
16:00 - 16:30	1	6100	0.557	1	6100	0.098	1	6100	0.655
16:30 - 17:00	1	6100	1.328	1	6100	0.082	1	6100	1.410
17:00 - 17:30	1	6100	0.049	**1**	**6100**	**3.148**	**1**	**6100**	**3.197**
17:30 - 18:00	1	6100	0.016	1	6100	0.164	1	6100	0.180
18:00 - 18:30									
18:30 - 19:00									
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			6.590			5.213			11.803

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

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

Parameter summary

Trip rate parameter range selected:	6100 - 6100 (units: sqm)
Survey date date range:	01/01/08 - 10/09/14
Number of weekdays (Monday-Friday):	1
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	0

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

Calculation Reference: AUDIT-846402-160405-0457

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : M - MIXED PRIVATE/AFFORDABLE HOUSING
MULTI-MODAL VEHICLES

Selected regions and areas:

01	**GREATER LONDON**		
	EG	EALING	1 days
	HD	HILLINGDON	2 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:	45 to 261 (units:)
Range Selected by User:	40 to 1751 (units:)

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/08 to 09/12/14

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:

Tuesday	1 days
Thursday	2 days

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

Selected survey types:

Manual count	3 days
Directional ATC Count	0 days

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

Selected Locations:

Suburban Area (PPS6 Out of Centre)	1
Neighbourhood Centre (PPS6 Local Centre)	2

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

Selected Location Sub Categories:

Residential Zone	3

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

Filtering Stage 3 selection:

Use Class:

C3	3 days

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

Population within 1 mile:

25,001 to 50,000	3 days

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

Population within 5 miles:

500,001 or More	3 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	2 days

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

Travel Plan:

Yes	3 days

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

LIST OF SITES relevant to selection parameters

1 **EG-03-M-02** **BLOCKS OF FLATS** **EALING**
FEATHERSTONE ROAD

SOUTHALL
Neighbourhood Centre (PPS6 Local Centre)
Residential Zone
Total Number of dwellings: 143
Survey date: THURSDAY *17/07/14* *Survey Type: MANUAL*

2 **HD-03-M-01** **BLOCK OF FLATS** **HILLINGDON**
UXBRIDGE ROAD

HAYES
Neighbourhood Centre (PPS6 Local Centre)
Residential Zone
Total Number of dwellings: 45
Survey date: THURSDAY *11/09/14* *Survey Type: MANUAL*

3 **HD-03-M-03** **TERRACED & FLATS** **HILLINGDON**
JUDGE HEATH LANE

HAYES
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 261
Survey date: TUESDAY *09/12/14* *Survey Type: MANUAL*

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

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
HM-03-M-01	Quantum too large

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING

MULTI-MODAL VEHICLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	150	0.065	3	150	0.178	3	150	0.243
08:00 - 09:00	3	150	0.078	**3**	**150**	**0.249**	**3**	**150**	**0.327**
09:00 - 10:00	3	150	0.076	3	150	0.109	3	150	0.185
10:00 - 11:00	3	150	0.053	3	150	0.107	3	150	0.160
11:00 - 12:00	3	150	0.076	3	150	0.060	3	150	0.136
12:00 - 13:00	3	150	0.065	3	150	0.085	3	150	0.150
13:00 - 14:00	3	150	0.076	3	150	0.091	3	150	0.167
14:00 - 15:00	3	150	0.069	3	150	0.116	3	150	0.185
15:00 - 16:00	3	150	0.163	3	150	0.122	3	150	0.285
16:00 - 17:00	3	150	0.125	3	150	0.076	3	150	0.201
17:00 - 18:00	3	150	0.165	3	150	0.089	3	150	0.254
18:00 - 19:00	**3**	**150**	**0.200**	3	150	0.096	3	150	0.296
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.211			1.378			2.589

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

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

Parameter summary

Trip rate parameter range selected:	45 - 261 (units:)
Survey date date range:	01/01/08 - 09/12/14
Number of weekdays (Monday-Friday):	3
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	1

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

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING

MULTI-MODAL TAXIS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	150	0.004	**3**	**150**	**0.007**	3	150	0.011
08:00 - 09:00	**3**	**150**	**0.007**	3	150	0.007	**3**	**150**	**0.014**
09:00 - 10:00	3	150	0.002	3	150	0.002	3	150	0.004
10:00 - 11:00	3	150	0.000	3	150	0.000	3	150	0.000
11:00 - 12:00	3	150	0.000	3	150	0.000	3	150	0.000
12:00 - 13:00	3	150	0.002	3	150	0.002	3	150	0.004
13:00 - 14:00	3	150	0.002	3	150	0.002	3	150	0.004
14:00 - 15:00	3	150	0.002	3	150	0.002	3	150	0.004
15:00 - 16:00	3	150	0.000	3	150	0.000	3	150	0.000
16:00 - 17:00	3	150	0.000	3	150	0.000	3	150	0.000
17:00 - 18:00	3	150	0.004	3	150	0.004	3	150	0.008
18:00 - 19:00	3	150	0.004	3	150	0.004	3	150	0.008
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.027			0.030			0.057

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

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

Parameter summary

Trip rate parameter range selected:	45 - 261 (units:)
Survey date date range:	01/01/08 - 09/12/14
Number of weekdays (Monday-Friday):	3
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	1

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

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING

MULTI-MODAL OGVS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	150	0.000	3	150	0.000	3	150	0.000
08:00 - 09:00	**3**	**150**	**0.004**	**3**	**150**	**0.004**	**3**	**150**	**0.008**
09:00 - 10:00	3	150	0.000	3	150	0.000	3	150	0.000
10:00 - 11:00	3	150	0.004	3	150	0.002	3	150	0.006
11:00 - 12:00	3	150	0.000	3	150	0.002	3	150	0.002
12:00 - 13:00	3	150	0.000	3	150	0.000	3	150	0.000
13:00 - 14:00	3	150	0.004	3	150	0.004	3	150	0.008
14:00 - 15:00	3	150	0.000	3	150	0.000	3	150	0.000
15:00 - 16:00	3	150	0.000	3	150	0.000	3	150	0.000
16:00 - 17:00	3	150	0.000	3	150	0.000	3	150	0.000
17:00 - 18:00	3	150	0.000	3	150	0.000	3	150	0.000
18:00 - 19:00	3	150	0.000	3	150	0.000	3	150	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.012			0.012			0.024

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

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

Parameter summary

Trip rate parameter range selected:	45 - 261 (units:)
Survey date date range:	01/01/08 - 09/12/14
Number of weekdays (Monday-Friday):	3
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	1

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

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING

MULTI-MODAL PSVS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	**3**	**150**	**0.004**	**3**	**150**	**0.004**	**3**	**150**	**0.008**
08:00 - 09:00	3	150	0.000	3	150	0.000	3	150	0.000
09:00 - 10:00	3	150	0.000	3	150	0.000	3	150	0.000
10:00 - 11:00	3	150	0.000	3	150	0.000	3	150	0.000
11:00 - 12:00	3	150	0.000	3	150	0.000	3	150	0.000
12:00 - 13:00	3	150	0.000	3	150	0.000	3	150	0.000
13:00 - 14:00	3	150	0.002	3	150	0.002	3	150	0.004
14:00 - 15:00	3	150	0.000	3	150	0.000	3	150	0.000
15:00 - 16:00	3	150	0.000	3	150	0.000	3	150	0.000
16:00 - 17:00	3	150	0.000	3	150	0.000	3	150	0.000
17:00 - 18:00	3	150	0.002	3	150	0.002	3	150	0.004
18:00 - 19:00	3	150	0.000	3	150	0.000	3	150	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.008			0.008			0.016

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

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

Parameter summary

Trip rate parameter range selected:	45 - 261 (units:)
Survey date date range:	01/01/08 - 09/12/14
Number of weekdays (Monday-Friday):	3
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	1

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

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING

MULTI-MODAL CYCLISTS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	150	0.000	**3**	**150**	**0.004**	3	150	0.004
08:00 - 09:00	3	150	0.000	3	150	0.004	3	150	0.004
09:00 - 10:00	3	150	0.000	3	150	0.000	3	150	0.000
10:00 - 11:00	3	150	0.000	3	150	0.000	3	150	0.000
11:00 - 12:00	3	150	0.000	3	150	0.000	3	150	0.000
12:00 - 13:00	3	150	0.000	3	150	0.002	3	150	0.002
13:00 - 14:00	3	150	0.000	3	150	0.000	3	150	0.000
14:00 - 15:00	3	150	0.002	3	150	0.000	3	150	0.002
15:00 - 16:00	3	150	0.002	3	150	0.000	3	150	0.002
16:00 - 17:00	3	150	0.002	3	150	0.002	3	150	0.004
17:00 - 18:00	**3**	**150**	**0.009**	3	150	0.002	**3**	**150**	**0.011**
18:00 - 19:00	3	150	0.000	3	150	0.002	3	150	0.002
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.015			0.016			0.031

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

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

Parameter summary

Trip rate parameter range selected:	45 - 261 (units:)
Survey date date range:	01/01/08 - 09/12/14
Number of weekdays (Monday-Friday):	3
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	1

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

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING

MULTI-MODAL VEHICLE OCCUPANTS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	150	0.076	3	150	0.305	3	150	0.381
08:00 - 09:00	3	150	0.100	**3**	**150**	**0.399**	**3**	**150**	**0.499**
09:00 - 10:00	3	150	0.100	3	150	0.129	3	150	0.229
10:00 - 11:00	3	150	0.058	3	150	0.131	3	150	0.189
11:00 - 12:00	3	150	0.091	3	150	0.065	3	150	0.156
12:00 - 13:00	3	150	0.073	3	150	0.096	3	150	0.169
13:00 - 14:00	3	150	0.082	3	150	0.105	3	150	0.187
14:00 - 15:00	3	150	0.073	3	150	0.156	3	150	0.229
15:00 - 16:00	**3**	**150**	**0.294**	3	150	0.171	3	150	0.465
16:00 - 17:00	3	150	0.183	3	150	0.116	3	150	0.299
17:00 - 18:00	3	150	0.245	3	150	0.107	3	150	0.352
18:00 - 19:00	3	150	0.281	3	150	0.122	3	150	0.403
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.656			1.902			3.558

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

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

Parameter summary

Trip rate parameter range selected:	45 - 261 (units:)
Survey date date range:	01/01/08 - 09/12/14
Number of weekdays (Monday-Friday):	3
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	1

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

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING

MULTI-MODAL PEDESTRIANS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	150	0.004	3	150	0.067	3	150	0.071
08:00 - 09:00	3	150	0.029	**3**	**150**	**0.301**	**3**	**150**	**0.330**
09:00 - 10:00	3	150	0.091	3	150	0.051	3	150	0.142
10:00 - 11:00	3	150	0.029	3	150	0.020	3	150	0.049
11:00 - 12:00	3	150	0.036	3	150	0.073	3	150	0.109
12:00 - 13:00	3	150	0.067	3	150	0.049	3	150	0.116
13:00 - 14:00	3	150	0.038	3	150	0.036	3	150	0.074
14:00 - 15:00	3	150	0.053	3	150	0.094	3	150	0.147
15:00 - 16:00	**3**	**150**	**0.167**	3	150	0.020	3	150	0.187
16:00 - 17:00	3	150	0.102	3	150	0.040	3	150	0.142
17:00 - 18:00	3	150	0.045	3	150	0.042	3	150	0.087
18:00 - 19:00	3	150	0.082	3	150	0.036	3	150	0.118
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.743			0.829			1.572

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

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

Parameter summary

Trip rate parameter range selected:	45 - 261 (units:)
Survey date date range:	01/01/08 - 09/12/14
Number of weekdays (Monday-Friday):	3
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	1

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

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING

MULTI-MODAL BUS/ TRAM PASSENGERS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	150	0.004	3	150	0.094	3	150	0.098
08:00 - 09:00	3	150	0.011	**3**	**150**	**0.149**	**3**	**150**	**0.160**
09:00 - 10:00	3	150	0.038	3	150	0.027	3	150	0.065
10:00 - 11:00	3	150	0.011	3	150	0.013	3	150	0.024
11:00 - 12:00	3	150	0.013	3	150	0.022	3	150	0.035
12:00 - 13:00	3	150	0.024	3	150	0.020	3	150	0.044
13:00 - 14:00	3	150	0.020	3	150	0.018	3	150	0.038
14:00 - 15:00	3	150	0.016	3	150	0.022	3	150	0.038
15:00 - 16:00	**3**	**150**	**0.069**	3	150	0.013	3	150	0.082
16:00 - 17:00	3	150	0.058	3	150	0.007	3	150	0.065
17:00 - 18:00	3	150	0.036	3	150	0.002	3	150	0.038
18:00 - 19:00	3	150	0.058	3	150	0.002	3	150	0.060
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.358			0.389			0.747

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

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

Parameter summary

Trip rate parameter range selected:	45 - 261 (units:)
Survey date date range:	01/01/08 - 09/12/14
Number of weekdays (Monday-Friday):	3
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	1

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

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING

MULTI-MODAL TOTAL RAIL PASSENGERS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	150	0.000	**3**	**150**	**0.042**	3	150	0.042
08:00 - 09:00	3	150	0.002	3	150	0.042	3	150	0.044
09:00 - 10:00	3	150	0.000	3	150	0.011	3	150	0.011
10:00 - 11:00	3	150	0.002	3	150	0.007	3	150	0.009
11:00 - 12:00	3	150	0.011	3	150	0.007	3	150	0.018
12:00 - 13:00	3	150	0.004	3	150	0.009	3	150	0.013
13:00 - 14:00	3	150	0.007	3	150	0.007	3	150	0.014
14:00 - 15:00	3	150	0.007	3	150	0.007	3	150	0.014
15:00 - 16:00	3	150	0.011	3	150	0.004	3	150	0.015
16:00 - 17:00	3	150	0.029	3	150	0.002	3	150	0.031
17:00 - 18:00	**3**	**150**	**0.047**	3	150	0.004	**3**	**150**	**0.051**
18:00 - 19:00	3	150	0.031	3	150	0.002	3	150	0.033
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.151			0.144			0.295

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

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

Parameter summary

Trip rate parameter range selected:	45 - 261 (units:)
Survey date date range:	01/01/08 - 09/12/14
Number of weekdays (Monday-Friday):	3
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	1

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

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING

MULTI-MODAL COACH PASSENGERS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	150	0.000	3	150	0.000	3	150	0.000
08:00 - 09:00	3	150	0.000	3	150	0.000	3	150	0.000
09:00 - 10:00	3	150	0.000	3	150	0.000	3	150	0.000
10:00 - 11:00	3	150	0.000	3	150	0.000	3	150	0.000
11:00 - 12:00	3	150	0.000	3	150	0.000	3	150	0.000
12:00 - 13:00	3	150	0.000	3	150	0.000	3	150	0.000
13:00 - 14:00	3	150	0.000	3	150	0.000	3	150	0.000
14:00 - 15:00	3	150	0.000	3	150	0.000	3	150	0.000
15:00 - 16:00	3	150	0.000	3	150	0.000	3	150	0.000
16:00 - 17:00	3	150	0.000	3	150	0.000	3	150	0.000
17:00 - 18:00	3	150	0.000	3	150	0.000	3	150	0.000
18:00 - 19:00	3	150	0.000	3	150	0.000	3	150	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.000			0.000			0.000

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

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

Parameter summary

Trip rate parameter range selected:	45 - 261 (units:)
Survey date date range:	01/01/08 - 09/12/14
Number of weekdays (Monday-Friday):	3
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	1

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

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING

MULTI-MODAL PUBLIC TRANSPORT USERS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	150	0.004	3	150	0.136	3	150	0.140
08:00 - 09:00	3	150	0.013	**3**	**150**	**0.192**	**3**	**150**	**0.205**
09:00 - 10:00	3	150	0.038	3	150	0.038	3	150	0.076
10:00 - 11:00	3	150	0.013	3	150	0.020	3	150	0.033
11:00 - 12:00	3	150	0.024	3	150	0.029	3	150	0.053
12:00 - 13:00	3	150	0.029	3	150	0.029	3	150	0.058
13:00 - 14:00	3	150	0.027	3	150	0.024	3	150	0.051
14:00 - 15:00	3	150	0.022	3	150	0.029	3	150	0.051
15:00 - 16:00	3	150	0.080	3	150	0.018	3	150	0.098
16:00 - 17:00	3	150	0.087	3	150	0.009	3	150	0.096
17:00 - 18:00	3	150	0.082	3	150	0.007	3	150	0.089
18:00 - 19:00	**3**	**150**	**0.089**	3	150	0.004	3	150	0.093
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.508			0.535			1.043

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

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

Parameter summary

Trip rate parameter range selected:	45 - 261 (units:)
Survey date date range:	01/01/08 - 09/12/14
Number of weekdays (Monday-Friday):	3
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	1

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

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING

MULTI-MODAL TOTAL PEOPLE

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	150	0.085	3	150	0.512	3	150	0.597
08:00 - 09:00	3	150	0.143	**3**	**150**	**0.895**	**3**	**150**	**1.038**
09:00 - 10:00	3	150	0.229	3	150	0.218	3	150	0.447
10:00 - 11:00	3	150	0.100	3	150	0.171	3	150	0.271
11:00 - 12:00	3	150	0.151	3	150	0.167	3	150	0.318
12:00 - 13:00	3	150	0.169	3	150	0.176	3	150	0.345
13:00 - 14:00	3	150	0.147	3	150	0.165	3	150	0.312
14:00 - 15:00	3	150	0.151	3	150	0.278	3	150	0.429
15:00 - 16:00	**3**	**150**	**0.543**	3	150	0.209	3	150	0.752
16:00 - 17:00	3	150	0.374	3	150	0.167	3	150	0.541
17:00 - 18:00	3	150	0.381	3	150	0.158	3	150	0.539
18:00 - 19:00	3	150	0.452	3	150	0.165	3	150	0.617
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.925			3.281			6.206

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

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

Parameter summary

Trip rate parameter range selected:	45 - 261 (units:)
Survey date date range:	01/01/08 - 09/12/14
Number of weekdays (Monday-Friday):	3
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	1

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

Calculation Reference: AUDIT-846402-160405-0407

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
Category : A - OFFICE
MULTI-MODAL VEHICLES

Selected regions and areas:

01	**GREATER LONDON**		
	BT	BRENT	1 days
	IS	ISLINGTON	1 days
	SK	SOUTHWARK	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:	Gross floor area
Actual Range:	2371 to 5500 (units: sqm)
Range Selected by User:	408 to 5000 (units: sqm)

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/08 to 19/05/15

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
Tuesday	1 days
Friday	1 days

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

Selected survey types:

Manual count	3 days
Directional ATC Count	0 days

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

Selected Locations:

Edge of Town Centre	1
Suburban Area (PPS6 Out of Centre)	2

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

Selected Location Sub Categories:

Commercial Zone	1
Built-Up Zone	2

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

Filtering Stage 3 selection:

Use Class:

B1	3 days

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

Population within 1 mile:

25,001 to 50,000	1 days
50,001 to 100,000	1 days
101,000 or More	1 days

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

Population within 5 miles:

500,001 or More	3 days

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

Car ownership within 5 miles:

0.5 or Less	2 days
0.6 to 1.0	1 days

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

Travel Plan:

No	3 days

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

LIST OF SITES relevant to selection parameters

1 **BT-02-A-02** **OFFICE** **BRENT**
WEMBLEY HILL ROAD

WEMBLEY
Suburban Area (PPS6 Out of Centre)
Built-Up Zone
Total Gross floor area: 4750 sqm
Survey date: TUESDAY *22/06/10* *Survey Type: MANUAL*

2 **IS-02-A-01** **OFFICES** **ISLINGTON**
ESSEX ROAD

ISLINGTON
Suburban Area (PPS6 Out of Centre)
Built-Up Zone
Total Gross floor area: 5500 sqm
Survey date: FRIDAY *24/10/08* *Survey Type: MANUAL*

3 **SK-02-A-02** **OFFICES** **SOUTHWARK**
ST OLAV'S COURT

ROTHERHITHE
Edge of Town Centre
Commercial Zone
Total Gross floor area: 2371 sqm
Survey date: MONDAY *20/10/08* *Survey Type: MANUAL*

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

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
CN-02-A-01	Too central
HD-02-A-07	GFA too large

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE

MULTI-MODAL VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	3	4207	0.055	3	4207	0.032	3	4207	0.087
07:30 - 08:00	3	4207	0.246	3	4207	0.032	3	4207	0.278
08:00 - 08:30	3	4207	0.222	3	4207	0.048	3	4207	0.270
08:30 - 09:00	3	4207	0.222	3	4207	0.048	3	4207	0.270
09:00 - 09:30	3	4207	0.269	3	4207	0.087	3	4207	0.356
09:30 - 10:00	**3**	**4207**	**0.325**	3	4207	0.119	**3**	**4207**	**0.444**
10:00 - 10:30	3	4207	0.309	3	4207	0.127	3	4207	0.436
10:30 - 11:00	3	4207	0.158	3	4207	0.151	3	4207	0.309
11:00 - 11:30	3	4207	0.151	3	4207	0.158	3	4207	0.309
11:30 - 12:00	3	4207	0.111	3	4207	0.071	3	4207	0.182
12:00 - 12:30	3	4207	0.158	3	4207	0.182	3	4207	0.340
12:30 - 13:00	3	4207	0.151	3	4207	0.182	3	4207	0.333
13:00 - 13:30	3	4207	0.119	3	4207	0.182	3	4207	0.301
13:30 - 14:00	3	4207	0.071	3	4207	0.071	3	4207	0.142
14:00 - 14:30	3	4207	0.206	3	4207	0.151	3	4207	0.357
14:30 - 15:00	3	4207	0.182	3	4207	0.103	3	4207	0.285
15:00 - 15:30	3	4207	0.119	3	4207	0.166	3	4207	0.285
15:30 - 16:00	3	4207	0.119	3	4207	0.119	3	4207	0.238
16:00 - 16:30	3	4207	0.087	3	4207	0.222	3	4207	0.309
16:30 - 17:00	3	4207	0.087	3	4207	0.190	3	4207	0.277
17:00 - 17:30	3	4207	0.095	**3**	**4207**	**0.293**	3	4207	0.388
17:30 - 18:00	3	4207	0.048	3	4207	0.174	3	4207	0.222
18:00 - 18:30	3	4207	0.079	3	4207	0.222	3	4207	0.301
18:30 - 19:00	3	4207	0.016	3	4207	0.111	3	4207	0.127
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			3.605			3.241			6.846

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

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

Parameter summary

Trip rate parameter range selected:	2371 - 5500 (units: sqm)
Survey date date range:	01/01/08 - 19/05/15
Number of weekdays (Monday-Friday):	3
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	2

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

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE

MULTI-MODAL TAXIS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	**3**	**4207**	**0.008**	**3**	**4207**	**0.008**	**3**	**4207**	**0.016**
07:30 - 08:00	3	4207	0.008	3	4207	0.008	3	4207	0.016
08:00 - 08:30	3	4207	0.008	3	4207	0.008	3	4207	0.016
08:30 - 09:00	3	4207	0.008	3	4207	0.008	3	4207	0.016
09:00 - 09:30	3	4207	0.008	3	4207	0.008	3	4207	0.016
09:30 - 10:00	3	4207	0.000	3	4207	0.000	3	4207	0.000
10:00 - 10:30	3	4207	0.000	3	4207	0.000	3	4207	0.000
10:30 - 11:00	3	4207	0.008	3	4207	0.008	3	4207	0.016
11:00 - 11:30	3	4207	0.000	3	4207	0.000	3	4207	0.000
11:30 - 12:00	3	4207	0.000	3	4207	0.000	3	4207	0.000
12:00 - 12:30	3	4207	0.000	3	4207	0.000	3	4207	0.000
12:30 - 13:00	3	4207	0.008	3	4207	0.008	3	4207	0.016
13:00 - 13:30	3	4207	0.000	3	4207	0.000	3	4207	0.000
13:30 - 14:00	3	4207	0.000	3	4207	0.000	3	4207	0.000
14:00 - 14:30	3	4207	0.008	3	4207	0.008	3	4207	0.016
14:30 - 15:00	3	4207	0.008	3	4207	0.008	3	4207	0.016
15:00 - 15:30	3	4207	0.008	3	4207	0.008	3	4207	0.016
15:30 - 16:00	3	4207	0.000	3	4207	0.000	3	4207	0.000
16:00 - 16:30	3	4207	0.008	3	4207	0.008	3	4207	0.016
16:30 - 17:00	3	4207	0.000	3	4207	0.000	3	4207	0.000
17:00 - 17:30	3	4207	0.008	3	4207	0.008	3	4207	0.016
17:30 - 18:00	3	4207	0.008	3	4207	0.008	3	4207	0.016
18:00 - 18:30	3	4207	0.000	3	4207	0.000	3	4207	0.000
18:30 - 19:00	3	4207	0.000	3	4207	0.000	3	4207	0.000
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.104			0.104			0.208

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

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

Parameter summary

Trip rate parameter range selected:	2371 - 5500 (units: sqm)
Survey date date range:	01/01/08 - 19/05/15
Number of weekdays (Monday-Friday):	3
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	2

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

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE
MULTI-MODAL OGVS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	3	4207	0.000	3	4207	0.000	3	4207	0.000
07:30 - 08:00	3	4207	0.000	3	4207	0.000	3	4207	0.000
08:00 - 08:30	3	4207	0.000	3	4207	0.000	3	4207	0.000
08:30 - 09:00	3	4207	0.000	3	4207	0.000	3	4207	0.000
09:00 - 09:30	3	4207	0.000	3	4207	0.000	3	4207	0.000
09:30 - 10:00	3	4207	0.000	3	4207	0.000	3	4207	0.000
10:00 - 10:30	3	4207	0.000	3	4207	0.000	3	4207	0.000
10:30 - 11:00	3	4207	0.000	3	4207	0.000	3	4207	0.000
11:00 - 11:30	**3**	**4207**	**0.008**	3	4207	0.000	3	4207	0.008
11:30 - 12:00	3	4207	0.000	3	4207	0.000	3	4207	0.000
12:00 - 12:30	3	4207	0.000	**3**	**4207**	**0.008**	3	4207	0.008
12:30 - 13:00	3	4207	0.008	3	4207	0.008	**3**	**4207**	**0.016**
13:00 - 13:30	3	4207	0.000	3	4207	0.000	3	4207	0.000
13:30 - 14:00	3	4207	0.000	3	4207	0.000	3	4207	0.000
14:00 - 14:30	3	4207	0.000	3	4207	0.000	3	4207	0.000
14:30 - 15:00	3	4207	0.000	3	4207	0.000	3	4207	0.000
15:00 - 15:30	3	4207	0.000	3	4207	0.000	3	4207	0.000
15:30 - 16:00	3	4207	0.008	3	4207	0.008	3	4207	0.016
16:00 - 16:30	3	4207	0.000	3	4207	0.000	3	4207	0.000
16:30 - 17:00	3	4207	0.000	3	4207	0.000	3	4207	0.000
17:00 - 17:30	3	4207	0.000	3	4207	0.000	3	4207	0.000
17:30 - 18:00	3	4207	0.000	3	4207	0.000	3	4207	0.000
18:00 - 18:30	3	4207	0.000	3	4207	0.000	3	4207	0.000
18:30 - 19:00	3	4207	0.000	3	4207	0.000	3	4207	0.000
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.024			0.024			0.048

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

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

Parameter summary

Trip rate parameter range selected:	2371 - 5500 (units: sqm)
Survey date date range:	01/01/08 - 19/05/15
Number of weekdays (Monday-Friday):	3
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	2

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

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE

MULTI-MODAL PSVS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	3	4207	0.000	3	4207	0.000	3	4207	0.000
07:30 - 08:00	3	4207	0.000	3	4207	0.000	3	4207	0.000
08:00 - 08:30	3	4207	0.000	3	4207	0.000	3	4207	0.000
08:30 - 09:00	3	4207	0.000	3	4207	0.000	3	4207	0.000
09:00 - 09:30	3	4207	0.000	3	4207	0.000	3	4207	0.000
09:30 - 10:00	**3**	**4207**	**0.008**	**3**	**4207**	**0.008**	**3**	**4207**	**0.016**
10:00 - 10:30	3	4207	0.000	3	4207	0.000	3	4207	0.000
10:30 - 11:00	3	4207	0.000	3	4207	0.000	3	4207	0.000
11:00 - 11:30	3	4207	0.000	3	4207	0.000	3	4207	0.000
11:30 - 12:00	3	4207	0.000	3	4207	0.000	3	4207	0.000
12:00 - 12:30	3	4207	0.000	3	4207	0.000	3	4207	0.000
12:30 - 13:00	3	4207	0.000	3	4207	0.000	3	4207	0.000
13:00 - 13:30	3	4207	0.008	3	4207	0.008	3	4207	0.016
13:30 - 14:00	3	4207	0.000	3	4207	0.000	3	4207	0.000
14:00 - 14:30	3	4207	0.000	3	4207	0.000	3	4207	0.000
14:30 - 15:00	3	4207	0.008	3	4207	0.000	3	4207	0.008
15:00 - 15:30	3	4207	0.000	3	4207	0.008	3	4207	0.008
15:30 - 16:00	3	4207	0.000	3	4207	0.000	3	4207	0.000
16:00 - 16:30	3	4207	0.000	3	4207	0.000	3	4207	0.000
16:30 - 17:00	3	4207	0.000	3	4207	0.000	3	4207	0.000
17:00 - 17:30	3	4207	0.000	3	4207	0.000	3	4207	0.000
17:30 - 18:00	3	4207	0.000	3	4207	0.000	3	4207	0.000
18:00 - 18:30	3	4207	0.000	3	4207	0.000	3	4207	0.000
18:30 - 19:00	3	4207	0.000	3	4207	0.000	3	4207	0.000
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.024			0.024			0.048

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

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

Parameter summary

Trip rate parameter range selected:	2371 - 5500 (units: sqm)
Survey date date range:	01/01/08 - 19/05/15
Number of weekdays (Monday-Friday):	3
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	2

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

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE

MULTI-MODAL CYCLISTS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	3	4207	0.000	3	4207	0.000	3	4207	0.000
07:30 - 08:00	3	4207	0.008	3	4207	0.000	3	4207	0.008
08:00 - 08:30	3	4207	0.016	3	4207	0.000	3	4207	0.016
08:30 - 09:00	3	4207	0.000	3	4207	0.008	3	4207	0.008
09:00 - 09:30	**3**	**4207**	**0.024**	3	4207	0.000	3	4207	0.024
09:30 - 10:00	3	4207	0.024	3	4207	0.000	3	4207	0.024
10:00 - 10:30	3	4207	0.000	3	4207	0.008	3	4207	0.008
10:30 - 11:00	3	4207	0.008	3	4207	0.008	3	4207	0.016
11:00 - 11:30	3	4207	0.000	3	4207	0.008	3	4207	0.008
11:30 - 12:00	3	4207	0.016	3	4207	0.008	3	4207	0.024
12:00 - 12:30	3	4207	0.000	3	4207	0.008	3	4207	0.008
12:30 - 13:00	3	4207	0.016	3	4207	0.008	3	4207	0.024
13:00 - 13:30	3	4207	0.000	3	4207	0.000	3	4207	0.000
13:30 - 14:00	3	4207	0.000	3	4207	0.008	3	4207	0.008
14:00 - 14:30	3	4207	0.000	3	4207	0.000	3	4207	0.000
14:30 - 15:00	3	4207	0.008	3	4207	0.000	3	4207	0.008
15:00 - 15:30	3	4207	0.016	3	4207	0.024	3	4207	0.040
15:30 - 16:00	3	4207	0.008	3	4207	0.016	3	4207	0.024
16:00 - 16:30	3	4207	0.000	3	4207	0.000	3	4207	0.000
16:30 - 17:00	3	4207	0.008	3	4207	0.000	3	4207	0.008
17:00 - 17:30	3	4207	0.000	**3**	**4207**	**0.048**	**3**	**4207**	**0.048**
17:30 - 18:00	3	4207	0.000	3	4207	0.032	3	4207	0.032
18:00 - 18:30	3	4207	0.008	3	4207	0.000	3	4207	0.008
18:30 - 19:00	3	4207	0.008	3	4207	0.016	3	4207	0.024
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.168			0.200			0.368

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

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

Parameter summary

Trip rate parameter range selected:	2371 - 5500 (units: sqm)
Survey date date range:	01/01/08 - 19/05/15
Number of weekdays (Monday-Friday):	3
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	2

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

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE

MULTI-MODAL VEHICLE OCCUPANTS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	3	4207	0.055	3	4207	0.032	3	4207	0.087
07:30 - 08:00	3	4207	0.261	3	4207	0.032	3	4207	0.293
08:00 - 08:30	3	4207	0.277	3	4207	0.071	3	4207	0.348
08:30 - 09:00	3	4207	0.238	3	4207	0.040	3	4207	0.278
09:00 - 09:30	3	4207	0.341	3	4207	0.095	3	4207	0.436
09:30 - 10:00	**3**	**4207**	**0.396**	3	4207	0.111	3	4207	0.507
10:00 - 10:30	3	4207	0.372	3	4207	0.151	3	4207	0.523
10:30 - 11:00	3	4207	0.198	3	4207	0.151	3	4207	0.349
11:00 - 11:30	3	4207	0.261	3	4207	0.230	3	4207	0.491
11:30 - 12:00	3	4207	0.135	3	4207	0.087	3	4207	0.222
12:00 - 12:30	3	4207	0.190	3	4207	0.230	3	4207	0.420
12:30 - 13:00	3	4207	0.206	3	4207	0.246	3	4207	0.452
13:00 - 13:30	3	4207	0.151	3	4207	0.214	3	4207	0.365
13:30 - 14:00	3	4207	0.087	3	4207	0.095	3	4207	0.182
14:00 - 14:30	3	4207	0.269	3	4207	0.174	3	4207	0.443
14:30 - 15:00	3	4207	0.206	3	4207	0.127	3	4207	0.333
15:00 - 15:30	3	4207	0.151	3	4207	0.230	3	4207	0.381
15:30 - 16:00	3	4207	0.166	3	4207	0.174	3	4207	0.340
16:00 - 16:30	3	4207	0.111	3	4207	0.277	3	4207	0.388
16:30 - 17:00	3	4207	0.103	3	4207	0.254	3	4207	0.357
17:00 - 17:30	3	4207	0.143	**3**	**4207**	**0.412**	**3**	**4207**	**0.555**
17:30 - 18:00	3	4207	0.055	3	4207	0.277	3	4207	0.332
18:00 - 18:30	3	4207	0.087	3	4207	0.317	3	4207	0.404
18:30 - 19:00	3	4207	0.016	3	4207	0.158	3	4207	0.174
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			4.475			4.185			8.660

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

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

Parameter summary

Trip rate parameter range selected:	2371 - 5500 (units: sqm)
Survey date date range:	01/01/08 - 19/05/15
Number of weekdays (Monday-Friday):	3
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	2

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

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE

MULTI-MODAL PEDESTRIANS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	3	4207	0.016	3	4207	0.000	3	4207	0.016
07:30 - 08:00	3	4207	0.040	3	4207	0.008	3	4207	0.048
08:00 - 08:30	3	4207	0.087	3	4207	0.008	3	4207	0.095
08:30 - 09:00	3	4207	0.230	3	4207	0.048	3	4207	0.278
09:00 - 09:30	3	4207	0.198	3	4207	0.087	3	4207	0.285
09:30 - 10:00	3	4207	0.206	3	4207	0.119	3	4207	0.325
10:00 - 10:30	3	4207	0.158	3	4207	0.087	3	4207	0.245
10:30 - 11:00	3	4207	0.166	3	4207	0.222	3	4207	0.388
11:00 - 11:30	3	4207	0.111	3	4207	0.087	3	4207	0.198
11:30 - 12:00	3	4207	0.103	3	4207	0.190	3	4207	0.293
12:00 - 12:30	3	4207	0.349	**3**	**4207**	**0.737**	3	4207	1.086
12:30 - 13:00	3	4207	0.364	3	4207	0.578	3	4207	0.942
13:00 - 13:30	3	4207	0.563	3	4207	0.634	**3**	**4207**	**1.197**
13:30 - 14:00	**3**	**4207**	**0.650**	3	4207	0.301	3	4207	0.951
14:00 - 14:30	3	4207	0.467	3	4207	0.222	3	4207	0.689
14:30 - 15:00	3	4207	0.285	3	4207	0.063	3	4207	0.348
15:00 - 15:30	3	4207	0.151	3	4207	0.111	3	4207	0.262
15:30 - 16:00	3	4207	0.325	3	4207	0.230	3	4207	0.555
16:00 - 16:30	3	4207	0.166	3	4207	0.087	3	4207	0.253
16:30 - 17:00	3	4207	0.151	3	4207	0.095	3	4207	0.246
17:00 - 17:30	3	4207	0.087	3	4207	0.166	3	4207	0.253
17:30 - 18:00	3	4207	0.032	3	4207	0.158	3	4207	0.190
18:00 - 18:30	3	4207	0.032	3	4207	0.032	3	4207	0.064
18:30 - 19:00	3	4207	0.032	3	4207	0.032	3	4207	0.064
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			4.969			4.302			9.271

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

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

Parameter summary

Trip rate parameter range selected:	2371 - 5500 (units: sqm)
Survey date date range:	01/01/08 - 19/05/15
Number of weekdays (Monday-Friday):	3
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	2

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

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE

MULTI-MODAL BUS/TRAM PASSENGERS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	3	4207	0.000	3	4207	0.000	3	4207	0.000
07:30 - 08:00	3	4207	0.016	3	4207	0.000	3	4207	0.016
08:00 - 08:30	3	4207	0.071	3	4207	0.008	3	4207	0.079
08:30 - 09:00	3	4207	0.246	3	4207	0.000	3	4207	0.246
09:00 - 09:30	**3**	**4207**	**0.254**	3	4207	0.016	3	4207	0.270
09:30 - 10:00	3	4207	0.214	3	4207	0.008	3	4207	0.222
10:00 - 10:30	3	4207	0.190	3	4207	0.063	3	4207	0.253
10:30 - 11:00	3	4207	0.174	3	4207	0.040	3	4207	0.214
11:00 - 11:30	3	4207	0.071	3	4207	0.063	3	4207	0.134
11:30 - 12:00	3	4207	0.095	3	4207	0.048	3	4207	0.143
12:00 - 12:30	3	4207	0.063	3	4207	0.111	3	4207	0.174
12:30 - 13:00	3	4207	0.048	3	4207	0.079	3	4207	0.127
13:00 - 13:30	3	4207	0.127	3	4207	0.119	3	4207	0.246
13:30 - 14:00	3	4207	0.087	3	4207	0.079	3	4207	0.166
14:00 - 14:30	3	4207	0.095	3	4207	0.071	3	4207	0.166
14:30 - 15:00	3	4207	0.127	3	4207	0.119	3	4207	0.246
15:00 - 15:30	3	4207	0.071	3	4207	0.071	3	4207	0.142
15:30 - 16:00	3	4207	0.048	3	4207	0.079	3	4207	0.127
16:00 - 16:30	3	4207	0.048	**3**	**4207**	**0.238**	**3**	**4207**	**0.286**
16:30 - 17:00	3	4207	0.000	3	4207	0.135	3	4207	0.135
17:00 - 17:30	3	4207	0.000	3	4207	0.222	3	4207	0.222
17:30 - 18:00	3	4207	0.008	3	4207	0.158	3	4207	0.166
18:00 - 18:30	3	4207	0.000	3	4207	0.095	3	4207	0.095
18:30 - 19:00	3	4207	0.000	3	4207	0.032	3	4207	0.032
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			2.053			1.854			3.907

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

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

Parameter summary

Trip rate parameter range selected:	2371 - 5500 (units: sqm)
Survey date date range:	01/01/08 - 19/05/15
Number of weekdays (Monday-Friday):	3
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	2

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

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE

MULTI-MODAL TOTAL RAIL PASSENGERS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	3	4207	0.000	3	4207	0.000	3	4207	0.000
07:30 - 08:00	3	4207	0.103	3	4207	0.000	3	4207	0.103
08:00 - 08:30	3	4207	0.143	3	4207	0.000	3	4207	0.143
08:30 - 09:00	3	4207	0.317	3	4207	0.000	3	4207	0.317
09:00 - 09:30	**3**	**4207**	**0.499**	3	4207	0.016	**3**	**4207**	**0.515**
09:30 - 10:00	3	4207	0.254	3	4207	0.000	3	4207	0.254
10:00 - 10:30	3	4207	0.079	3	4207	0.016	3	4207	0.095
10:30 - 11:00	3	4207	0.103	3	4207	0.048	3	4207	0.151
11:00 - 11:30	3	4207	0.024	3	4207	0.016	3	4207	0.040
11:30 - 12:00	3	4207	0.024	3	4207	0.063	3	4207	0.087
12:00 - 12:30	3	4207	0.048	3	4207	0.048	3	4207	0.096
12:30 - 13:00	3	4207	0.024	3	4207	0.048	3	4207	0.072
13:00 - 13:30	3	4207	0.032	3	4207	0.016	3	4207	0.048
13:30 - 14:00	3	4207	0.055	3	4207	0.024	3	4207	0.079
14:00 - 14:30	3	4207	0.008	3	4207	0.079	3	4207	0.087
14:30 - 15:00	3	4207	0.008	3	4207	0.040	3	4207	0.048
15:00 - 15:30	3	4207	0.008	3	4207	0.024	3	4207	0.032
15:30 - 16:00	3	4207	0.071	3	4207	0.055	3	4207	0.126
16:00 - 16:30	3	4207	0.016	3	4207	0.166	3	4207	0.182
16:30 - 17:00	3	4207	0.071	3	4207	0.151	3	4207	0.222
17:00 - 17:30	3	4207	0.008	**3**	**4207**	**0.364**	3	4207	0.372
17:30 - 18:00	3	4207	0.000	3	4207	0.254	3	4207	0.254
18:00 - 18:30	3	4207	0.016	3	4207	0.174	3	4207	0.190
18:30 - 19:00	3	4207	0.008	3	4207	0.079	3	4207	0.087
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			1.919			1.681			3.600

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

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

Parameter summary

Trip rate parameter range selected:	2371 - 5500 (units: sqm)
Survey date date range:	01/01/08 - 19/05/15
Number of weekdays (Monday-Friday):	3
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	2

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

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE

MULTI-MODAL COACH PASSENGERS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	3	4207	0.000	3	4207	0.000	3	4207	0.000
07:30 - 08:00	3	4207	0.000	3	4207	0.000	3	4207	0.000
08:00 - 08:30	3	4207	0.000	3	4207	0.000	3	4207	0.000
08:30 - 09:00	3	4207	0.000	3	4207	0.000	3	4207	0.000
09:00 - 09:30	3	4207	0.000	3	4207	0.000	3	4207	0.000
09:30 - 10:00	3	4207	0.000	3	4207	0.000	3	4207	0.000
10:00 - 10:30	3	4207	0.000	3	4207	0.000	3	4207	0.000
10:30 - 11:00	3	4207	0.000	3	4207	0.000	3	4207	0.000
11:00 - 11:30	3	4207	0.000	3	4207	0.000	3	4207	0.000
11:30 - 12:00	3	4207	0.000	3	4207	0.000	3	4207	0.000
12:00 - 12:30	3	4207	0.000	3	4207	0.000	3	4207	0.000
12:30 - 13:00	3	4207	0.000	3	4207	0.000	3	4207	0.000
13:00 - 13:30	3	4207	0.000	3	4207	0.000	3	4207	0.000
13:30 - 14:00	3	4207	0.000	3	4207	0.000	3	4207	0.000
14:00 - 14:30	3	4207	0.000	3	4207	0.000	3	4207	0.000
14:30 - 15:00	3	4207	0.000	3	4207	0.000	3	4207	0.000
15:00 - 15:30	3	4207	0.000	3	4207	0.000	3	4207	0.000
15:30 - 16:00	3	4207	0.000	3	4207	0.000	3	4207	0.000
16:00 - 16:30	3	4207	0.000	3	4207	0.000	3	4207	0.000
16:30 - 17:00	3	4207	0.000	3	4207	0.000	3	4207	0.000
17:00 - 17:30	3	4207	0.000	3	4207	0.000	3	4207	0.000
17:30 - 18:00	3	4207	0.000	3	4207	0.000	3	4207	0.000
18:00 - 18:30	3	4207	0.000	3	4207	0.000	3	4207	0.000
18:30 - 19:00	3	4207	0.000	3	4207	0.000	3	4207	0.000
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.000			0.000			0.000

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

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

Parameter summary

Trip rate parameter range selected:	2371 - 5500 (units: sqm)
Survey date date range:	01/01/08 - 19/05/15
Number of weekdays (Monday-Friday):	3
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	2

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

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE

MULTI-MODAL PUBLIC TRANSPORT USERS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	3	4207	0.000	3	4207	0.000	3	4207	0.000
07:30 - 08:00	3	4207	0.119	3	4207	0.000	3	4207	0.119
08:00 - 08:30	3	4207	0.214	3	4207	0.008	3	4207	0.222
08:30 - 09:00	3	4207	0.563	3	4207	0.000	3	4207	0.563
09:00 - 09:30	**3**	**4207**	**0.753**	3	4207	0.032	**3**	**4207**	**0.785**
09:30 - 10:00	3	4207	0.467	3	4207	0.008	3	4207	0.475
10:00 - 10:30	3	4207	0.269	3	4207	0.079	3	4207	0.348
10:30 - 11:00	3	4207	0.277	3	4207	0.087	3	4207	0.364
11:00 - 11:30	3	4207	0.095	3	4207	0.079	3	4207	0.174
11:30 - 12:00	3	4207	0.119	3	4207	0.111	3	4207	0.230
12:00 - 12:30	3	4207	0.111	3	4207	0.158	3	4207	0.269
12:30 - 13:00	3	4207	0.071	3	4207	0.127	3	4207	0.198
13:00 - 13:30	3	4207	0.158	3	4207	0.135	3	4207	0.293
13:30 - 14:00	3	4207	0.143	3	4207	0.103	3	4207	0.246
14:00 - 14:30	3	4207	0.103	3	4207	0.151	3	4207	0.254
14:30 - 15:00	3	4207	0.135	3	4207	0.158	3	4207	0.293
15:00 - 15:30	3	4207	0.079	3	4207	0.095	3	4207	0.174
15:30 - 16:00	3	4207	0.119	3	4207	0.135	3	4207	0.254
16:00 - 16:30	3	4207	0.063	3	4207	0.404	3	4207	0.467
16:30 - 17:00	3	4207	0.071	3	4207	0.285	3	4207	0.356
17:00 - 17:30	3	4207	0.008	**3**	**4207**	**0.586**	3	4207	0.594
17:30 - 18:00	3	4207	0.008	3	4207	0.412	3	4207	0.420
18:00 - 18:30	3	4207	0.016	3	4207	0.269	3	4207	0.285
18:30 - 19:00	3	4207	0.008	3	4207	0.111	3	4207	0.119
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			3.969			3.533			7.502

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

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

Parameter summary

Trip rate parameter range selected:	2371 - 5500 (units: sqm)
Survey date date range:	01/01/08 - 19/05/15
Number of weekdays (Monday-Friday):	3
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	2

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

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE

MULTI-MODAL TOTAL PEOPLE

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	3	4207	0.071	3	4207	0.032	3	4207	0.103
07:30 - 08:00	3	4207	0.428	3	4207	0.040	3	4207	0.468
08:00 - 08:30	3	4207	0.594	3	4207	0.087	3	4207	0.681
08:30 - 09:00	3	4207	1.030	3	4207	0.095	3	4207	1.125
09:00 - 09:30	**3**	**4207**	**1.315**	3	4207	0.214	3	4207	1.529
09:30 - 10:00	3	4207	1.093	3	4207	0.238	3	4207	1.331
10:00 - 10:30	3	4207	0.800	3	4207	0.325	3	4207	1.125
10:30 - 11:00	3	4207	0.650	3	4207	0.467	3	4207	1.117
11:00 - 11:30	3	4207	0.467	3	4207	0.404	3	4207	0.871
11:30 - 12:00	3	4207	0.372	3	4207	0.396	3	4207	0.768
12:00 - 12:30	3	4207	0.650	3	4207	1.133	3	4207	1.783
12:30 - 13:00	3	4207	0.658	3	4207	0.959	3	4207	1.617
13:00 - 13:30	3	4207	0.872	3	4207	0.982	**3**	**4207**	**1.854**
13:30 - 14:00	3	4207	0.879	3	4207	0.507	3	4207	1.386
14:00 - 14:30	3	4207	0.840	3	4207	0.547	3	4207	1.387
14:30 - 15:00	3	4207	0.634	3	4207	0.349	3	4207	0.983
15:00 - 15:30	3	4207	0.396	3	4207	0.460	3	4207	0.856
15:30 - 16:00	3	4207	0.618	3	4207	0.555	3	4207	1.173
16:00 - 16:30	3	4207	0.341	3	4207	0.769	3	4207	1.110
16:30 - 17:00	3	4207	0.333	3	4207	0.634	3	4207	0.967
17:00 - 17:30	3	4207	0.238	**3**	**4207**	**1.212**	3	4207	1.450
17:30 - 18:00	3	4207	0.095	3	4207	0.879	3	4207	0.974
18:00 - 18:30	3	4207	0.143	3	4207	0.618	3	4207	0.761
18:30 - 19:00	3	4207	0.063	3	4207	0.317	3	4207	0.380
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			13.580			12.219			25.799

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THE EQUUS PARTNERSHIP

Member of the Association of Noise Consultants

CONSULTANTS IN ACOUSTICS

GREGGS BAKERY SITE
GOULD ROAD, TWICKENHAM

NOISE ASSESSMENT REPORT

May 2016

Report prepared for:

Colliers international

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1 INTRODUCTION

This **Noise Assessment Report** has been produced to understand the impact of the current use of the site as a bakery on the neighbouring residential properties. It then goes on to assess the acceptability of the redevelopment of the site for a mixed commercial and residential use.

This **Noise Assessment Report** presents:

- The results of noise monitoring undertaken at the site to determine existing environmental noise levels generated at the site.
- Discussion regarding the nature and intensity of the current site use, and the significance of the current site noise levels with respect to the amenity of the existing neighbouring residential properties in the context of relevant design guidance.
- Discussion of the suitability of the site with respect to the amenity of the proposed uses, and a preliminary assessment of the likely requirements for any scheme to mitigate environmental noise intrusion into the proposed development in accordance with relevant national, regional and local planning policy.

2 SITE DESCRIPTION

The site is located to the south of the river Crane within a predominantly residential area, and is bounded to the west and east by the gardens and rear elevations of the residential properties fronting Crane Road and Norcutt Road, respectively, and to the south by Edwin Road. The principal access to the site for lorries is to the south from Edwin Road, and there is a smaller entrance to the north end of the site at the junction of Gould Road and Crane Road which is mainly used by cars and light vehicles. Edwin Road and the other thoroughfares in the immediate vicinity of the site are narrow, residential roads with vehicles parked down both sides, and are generally not suitable to be used by large, commercial vehicles.

There are railway lines to the north of the river, approximately 20m north of the site, which have been observed to carry mostly relatively slow moving, electric passenger trains. The site is relatively close to Heathrow airport which is approximately 4km to the west, and is overflown when

the airport is on easterly operations. The operation of easterly take-off and landings is entirely weather dependent, but occurs roughly 30 percent of the time, mostly during the summer months.

Most of the northern half site is covered by large, mainly single storey industrial buildings which accommodate the various bakery processes and activities. To the south of these buildings there is a covered loading/unloading bay for lorries, accessed directly from the Edwin Road entrance. To the west the rear elevations of the residential properties in Crane Road are typically around 20m from the bakery buildings, however the rear elevations of the properties in Norcutt Road are much closer, being within approximately 5m in some cases.

At the south-west corner of the site there is another industrial building accessed from Edwin Road which is not part of the current bakery use, presently being used as an engineering works.

The location of the site and its general environs are shown on the plan attached at **Appendix A**. The site boundary is shown outlined in red, and from this plan the large number of dwellings located in very close proximity to the site can be clearly seen.

3 CURRENT USE

The site has been used for industrial purposes for many years, the oldest building dating back to the nineteenth century, and has been used as a bakery for more than 60 years. The bakery currently operates effectively on a 24 hour basis every day of the week. We understand that the only time that bakery processes cease is between 20.00 on Saturday and 06.00 on Sunday, but that even during this period other site activities, including the operation of some plant items and arrival and departure of lorries and other vehicles, continues. From the location plan it can be seen that the whole site is fully utilised, and it was observed in fact to be very busy and congested with, in particular, insufficient space for lorries to park and turn, which leads to the situation where lorries are frequently forced to wait in the surrounding residential streets whilst waiting for space on site to become available. Most of the lorries making deliveries and collecting product from the bakery are refrigerated, and these vehicles are generally fitted with high level fridge packs which generate significant noise levels.

Inside the bakery buildings there are various production lines and processes, some of which generate fairly high noise levels, to the extent that certain internal areas are designated Hearing Protection Zones. Most of the bakery buildings are many years old with lightweight, uninsulated

roofs, and therefore provide little resistance to noise break-out. There are also various fans and other plant items, some of which produce significant levels of atmospheric noise emissions.

Therefore the combination of the continuous day and night time operation of the site, frequent arrivals and departures of refrigerated lorries, the relatively poor sound insulation of the bakery buildings and the operation of plant items, means that the surrounding residential areas are inevitably affected by noise emissions from the site to a significant extent. This is reflected by the fact that the bakery has a long history of noise complaints.

4 DEVELOPMENT PROPOSALS

The proposed scheme entails the demolition and removal of all existing buildings at the site and the construction of a new mixed use development. The current proposed outline scheme shows 3/4 storey commercial buildings with undercroft parking at the north of the site accessed from the Gould Road entrance, and a mix of low rise town houses and flats to the rest of the site with access from Edwin Road.

5 PLANNING POLICY CONTEXT & ASSESSMENT GUIDANCE

In considering the potential noise impact of the proposed development, reference will be made to the following policy guidance and 'industry standard' design guidance.

5.1 National Policy

Current governmental guidance relating to the determination of planning applications is given in the recently published National Planning Policy Framework (NPPF).

Paragraph 109 of the NPPF advises:

> *"The planning system should contribute to and enhance the natural and local environment by:*

protecting and enhancing valued landscapes, geological conservation interests and soils;

recognising the wider benefits of ecosystem services;

minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;

preventing both new and existing development from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels of soil, air, water or noise pollution or land instability; and

remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.

With specific regard to noise, paragraph 123 of the NPPF states:

"Planning policies and decisions should aim to:

avoid noise from giving rise to significant adverse impacts on health and quality of life as a result of new development;

mitigate and reduce to a minimum other adverse impacts on health and quality of life arising from noise from new development, including through the use of conditions;

recognise that development will often create some noise and existing businesses wanting to develop in continuance of their business should not have unreasonable restrictions put on them because of changes in nearby land uses since they were established; and

identify and protect areas of tranquillity which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason."

With regard to the "adverse impacts" referred to in the first two of the above bullet points, the NPPF directs the reader to the advice contained in DEFRA's Noise Policy Statement for England (NPSE). This Policy Statement introduces the concept of a "Significant Observed Adverse Effect Level" (SOAEL), "Lowest Observed Adverse Effect Level" (LOAEL) and "No Observed Adverse Effect Level" (NOAEL). However, whilst the intent of the NPSE in relation to the NPPF is clear, the Noise Policy Statement for England does not, at this time, provide any quantitative threshold values for each identified level of "effect". Indeed, the NPSE carefully highlights that:

> *"It is not possible to have a single objective noise-based measure that defines SOAEL that is applicable to all sources of noise in all situations. Consequently, the SOAEL is likely to be different for different noise sources, for different receptors and at different times. It is acknowledged that further research is required to increase our understanding of what may constitute a significant adverse impact on health and quality of life from noise. However, not having specific SOAEL values in the NPSE provides the necessary policy flexibility until further evidence and suitable guidance is available."*

The Government has now issued *"National Planning Practice Guidance"* to assist in understanding the perception of noise effects, outcomes and actions that should be taken to align decision making with the NPPF. The table below sets out this guidance:

Perception	Examples of Outcomes	Increasing Effect Level	Action
Not noticeable	No Effect	No Observed Effect	**No specific measures required**
No Observed Adverse Effect Level (NOAEL)			
Noticeable and not intrusive	Noise can be heard, but does not cause any change in behaviour or attitude. Can slightly affect the acoustic character of the area but not such that there is a perceived change in the quality of life.	No Observed Adverse Effect	**No specific measures required**

Lowest Observed Adverse Effect Level (LOAEL)			
Noticeable and intrusive	Noise can be heard and causes small changes in behaviour and/or attitude, e.g. turning up volume of television; speaking more loudly; closing windows for some of the time because of the noise. Potential for non-awakening sleep disturbance. Affects the acoustic character of the area such that there is a perceived change in the quality of life.	Observed Adverse Effect	**Mitigate and reduce to a minimum**
Significant Observed Adverse Effect Level (SOAEL)			
Noticeable and disruptive	The noise causes a material change in behaviour and/or attitude, e.g. having to keep windows closed most of the time, avoiding certain activities during periods of intrusion. Potential for sleep disturbance resulting in difficulty in getting to sleep, premature awakening and difficulty in getting back to sleep. Quality of life diminished due to change in acoustic character of the area.	Significant Observed Adverse Effect	**Avoid**
Noticeable and very disruptive	Extensive and regular changes in behaviour and/or an inability to mitigate effect of noise leading to psychological stress or physiological effects, e.g. regular sleep deprivation/awakening; loss of appetite, significant, medically definable harm, e.g. auditory and non-auditory	Unacceptable Adverse Effect	**Prevent**

In light of the above, it can be seen that whilst the NPPF and associated planning practice guidance sets out stringent imperatives to ensure the satisfactory development of land in relation to possible noise impacts, the NPPF does not generally provide any detailed technical guidance defining what may be considered to constitute a *"significant" or "other"* adverse impact. In the absence of such technical guidance, reference needs to be been made to sustainable development standards set out in local policy and/or relevant *'industry standard'* guidance, as set out later in this report.

5.2 Regional Policy

5.2.1 The London Plan 2011

The London Plan includes policies to make London a more attractive, well-designed and green city. With regard to the noise, Policies 5.3 (Sustainable

Design and Construction) and 7.15 (Reducing Noise and Enhancing Soundscapes) are most relevant.

Policy 5.3 requires that:

> *"The highest standards of sustainable design and construction should be achieved in London to improve the environmental performance of new developments and to adapt to the effects of climate change over their lifetime."*

The policy further requires that:

> *"Major development proposals should meet the minimum standards outlined in the Mayor's supplementary planning guidance and this should be clearly demonstrated within a design and access statement. The standards include measures to achieve other policies in this Plan and the following sustainable design principles:*
>
> *.....*
>
> *d minimising pollution (including noise, air and urban run-off)*

Policy 7.15 sets out the following aims:

> ***Strategic***
>
> *A The transport, spatial and design policies of this plan will be implemented in order to reduce noise and support the objectives of the Mayor's Ambient Noise Strategy.*
>
> ***Planning decisions***
>
> *B Development proposals should seek to reduce noise by:*
>
> *a minimising the existing and potential adverse impacts of noise on, from, within, or in the vicinity of, development proposals*

b *separating new noise sensitive development from major noise sources wherever practicable through the use of distance, screening, or internal layout in preference to sole reliance on sound insulation*

c *promoting new technologies and improved practices to reduce noise at source.*

LDF preparation

C *Boroughs and others with relevant responsibilities should have policies to:*

a *reduce the adverse impact of noise through the distribution of noise making and noise sensitive uses, and in highway management and transport policies (see Chapter 6)*

b *protect Quiet Areas, to be formally identified under Environmental Noise (England) Regulations 2006 (as amended) and consider protection of spaces of relative tranquillity or high soundscape quality, particularly through borough open space strategies.*

5.2.2 "Sounder City" – The Mayor's Ambient Noise Strategy (March 2004)

The Mayor's ambient noise strategy addresses three key noise issues:

- *Securing good, noise-reducing surfaces on Transport for London's roads.*
- *Securing a night aircraft ban across London.*
- *Reducing noise through better planning and design of new housing.*

Other priorities highlighted in the strategy are:

- *extending good, noise-reducing surfaces across all roads where they would be effective, along with less disruptive and better reinstated streetworks*

- *encouraging quieter vehicles*
- *building noise reduction into day-to-day traffic management – to maximise gains from reducing stop-start driving as congestion falls, smoothing traffic flow, allocating street space better, and other transport measures*
- *improving noise environments through 'Streets for People', in Home Zones, in town centres, and in exemplary public space projects*
- *developing a Traffic Noise Action Programme for the 580 kilometres of roads which Transport for London manages, including targeted traffic noise reduction projects*
- *trialling fuel cell buses, seeking to trial hybrid-electric buses, and seeking smoother and quieter driving, including through driver training*
- *establishing a London Ambient Noise Fund for exemplary noise reduction projects, and a London Domestic Noise Fund to improve internal and external noise, especially in poorly-converted flats*
- *seeking improved railway track quality and maintenance on national rail and Underground as far as organisation and funding allow*
- *securing support for exemplary noise barrier-integrated photovoltaic power generation along suitable roads and railways, and noise screening from safety and security fencing*
- *promoting development alongside or over suitable roads and railways, protecting wider areas from noise*
- *ensuring that 'polluter pays' levies compensate those affected by aircraft noise and other effects, such as through Aviation Environment Funds for each airport*
- *reducing noise through better planning and design, where London's growth in people and jobs presents challenges, but redevelopment and refurbishment also offer opportunities - high density, mixed-use development can create quiet outdoor spaces away from traffic*
- *examining the scope for a Mayor's Sound Award, and promoting exemplary City Soundscape projects.*

5.3 Local Policy

Local planning policy is set out in the London Borough of Richmond Upon Thames' Local Development Framework Development Management Plan adopted November 2011. **Policy DM DC 5 Neighbourliness, Sunlighting and Daylighting** states:

In considering proposals for development the Council will seek to protect adjoining properties from unreasonable loss of privacy, pollution, visual intrusion, noise and disturbance.

To protect privacy, for residential development there should normally be a minimum distance of 20 m between main facing windows of habitable rooms.

The Council will generally seek to ensure that the design and layout of buildings enables sufficient sunlight and daylight to penetrate into and between buildings, and that adjoining land or properties are protected from overshadowing in accordance with established standards.

5.4 Other Guidance

i) BS 8233:2014

Recommendations for indoor ambient noise levels within residential accommodation are given in Table 4 of BS 8233:2014 *Guidance on sound insulation and noise reduction for buildings,* which is reproduced below:

Table 4 Indoor ambient noise levels for dwellings

Activity	Location	07.00 – 23.00	23.00 – 07.00
Resting	Living room	35 dB $L_{Aeq,\ 16\ hour}$	–
Dining	Dining room/area	40 dB $L_{Aeq,\ 16\ hour}$	–
Sleeping (daytime resting)	Bedroom	35 dB $L_{Aeq,\ 16\ hour}$	30 dB $L_{Aeq,\ 8\ hour}$

It is suggested that in order to ensure the satisfactory amenity of future residents, the above values should be adopted as design targets for the control of external noise intrusion into the residential parts of the proposed development, and that adoption of these values would therefore constitute compliance with the National and Local planning policy outlined above.

It should be noted that the Standard does not provide specific guidance with respect to L_{max} noise levels in bedrooms at night, however the following guidance is given in Note 4 to the Table:

NOTE 4 Regular individual noise events (for example, scheduled aircraft or passing trains) can cause sleep disturbance. A guideline value may be set in terms of SEL or $L_{Amax,F}$ depending on the character and number of events per night. Sporadic noise events could require separate values.

WHO guidelines (on which the guidance in this particular section of BS 8233 is largely based) suggest that during the night time period, sleep disturbance could be anticipated where L_{Amax} noise levels within bedrooms regularly exceed 45 dB. We would therefore suggest that a value of 45 dB $L_{Amax, fast}$ should be adopted for typically occurring individual noise events within residential bedrooms at night, but in the spirit of the guidance expressed in BS 8233, this should be considered a guideline target rather than a rigid, not to be exceeded criterion.

ii) Guidelines For Community Noise – 1999 (World Health Organisation)

This document provide a comprehensive summary of research regarding the effects of noise on the community. The introduction of the Guidelines state:

> *"Community noise (also called environmental noise, residential noise or domestic noise) is defined as noise emitted from all sources, except noise at the industrial workplace. Main sources of community noise include road, rail and air traffic, industries, construction and public work, and the neighbourhood. Typical neighbourhood noise comes from premises and installations related to the catering trade (restaurant, cafeterias, discotheques, etc.); from live or recorded music; from sporting events including motor sports; from playgrounds and car parks; and from domestic animals such as barking dogs. The main indoor sources are ventilation systems, office machines, home appliances and neighbours.*

Section 2 of the Guidelines presents a general discussion regarding the types of noise affecting communities and their measurement. The guidelines promote the use of the $L_{Aeq,T}$ noise index. However, where there are distinct events to the noise, such as with aircraft or railway noise, the guidelines recommend that measures of the individual events should be obtained (using, for example, L_{Amax} or L_{AE}), in addition to $L_{Aeq,T}$ measurements.

For dwellings, it is recommended that internal noise levels do not exceed a value of 35dB $L_{Aeq,T}$ in living rooms during the daytime (07.00 to 23.00 hours). These values equate to external sound levels of 50dB $L_{Aeq,T}$ incident on the windows of living rooms.

The WHO Guidelines also state that:

"During the daytime, few people are seriously annoyed by activities with L_{Aeq} levels below 55dB; or moderately annoyed with L_{Aeq} levels below 50dB."

With regard to night-time noise, Section 4.3.2 of the WHO Guidelines state:

"At night, sound pressure levels at the outside façades of the living spaces should not exceed 45 dB L_{Aeq} and 60 dB L_{Amax}, so that people may sleep with bedroom windows open. These values have been obtained by assuming that that the noise reduction from outside to inside with the window partly open is 15 dB."

6 EXISTING NOISE ENVIRONMENT

In order to determine the typical current noise levels in the vicinity of the site, a noise survey was undertaken on 20th and 21st April 2016. During the survey period it was noted that Heathrow airport was on easterly operations.

6.1 Measurement Locations

Noise levels were continuously monitored at three measurement locations, as follows:

Position 1: At first floor level on the exterior of the transport office building at the south end of the site, overlooking the loading/unloading bay and the Edwin Road site entrance.

Position 2: At the western boundary of the site to the rear gardens of the properties fronting Crane.

Position 3: On the first floor flat roof of the office building at the north end of the site, overlooking the railway lines.

The approximate locations of the measurement positions are also shown on **Figure** 2 attached at **Appendix B**.

6.2 Survey Procedure

At each measurement location, sample measurements of the L_{A90}, L_{Aeq} and $L_{Amax,fast}$ sound levels were made over consecutive 15 minute periods. The analysers were also programmed to record corresponding octave band frequency spectra.

Sample manned measurements were also made during site attendances.

Please refer to **Appendix C** for an explanation of the acoustic terminology used above.

6.3 Instrumentation

The following instrumentation was used for the survey:

Position 1

Larson Davis Precision Sound Level Analyser	Type 824
GRAS ½" Condenser Microphone	Type 40AE
Brüel and Kjær Sound Level Calibrator	Type 4230
Proscon Outdoor Microphone Kit	

Position 2

Brüel and Kjær Precision Sound Level Analyser	Type 2260
Brüel and Kjær ½" Condenser Microphone	Type 4189
Brüel and Kjær Sound Level Calibrator	Type 4230
Brüel and Kjær Outdoor Microphone Kit	Type UA 1404

Position 3

Svantek Sound and Vibration Data Logger	Type 948
MCE ½" Condenser Microphone	Type 212
Brüel and Kjær Sound Level Calibrator	Type 4230
Brüel and Kjær Outdoor Microphone Kit	Type UA 1404

The sound level analysers were calibrated prior to the survey and the calibration was checked upon completion. No drift was found to have occurred.

6.4 Weather Conditions

Weather conditions during the survey period mild and dry with very light winds

Typical measured sound levels are presented on **Time History Graphs *6564/TH1, TH2*** and ***TH3*** attached at **Appendix D**.

6.5 Discussion of Results

At Position 1 the measured values are dominated by noise generated by lorries entering and leaving the site and by loading bay activity. Noise levels remained relatively high throughout the survey period (the daytime average was 69 dB L_{Aeq} and the night time average was 60 dB L_{Aeq}), which reflects the fact that the site remains active on a 24 hour basis. Background noise levels were also found to be dominated and controlled by lorry and loading bay noise.

Noise levels measured at Position 2 were lower since this location is screened from the noise generated in the vicinity of the loading bay and site entrance by the southern end of the factory building. Noise levels were influenced by the break-out of noise from inside the factory. The average daytime value was 61 dB L_{Aeq}, whilst the average night time value was 53 dB L_{Aeq}. The measured background noise levels (average of 50 dB L_{A90} during the daytime period and 46 dB L_{A90} during the night time) are likely to be influenced to some extent by plant and/or factory noise, but are likely to have been also affected by remote environmental sources.

At position 3 noise levels were jointly influenced by plant noise, noise break-out from the factory buildings and noise from trains and aircraft. Manual sample measurements near this location indicated that typical maximum noise levels due to train and plane events are around 79 dB L_{Amax} and 74 dB L_{Amax}, respectively, and it is likely therefore that most of the L_{Amax} values recorded during the survey period are attributable to these sources. The underlying background noise level remained fairly steady, which suggests that this was controlled by noise from an item of plant.

7 IMPACT OF CURRENT NOISE LEVELS

From site observations and the results of the survey it is subjectively very clear that the residential properties in the immediate vicinity are affected to a significant degree by noise emissions from the site itself and, although assessment of this was beyond the scope of this assessment, it is further likely that noise associated with commercial vehicle activity in the nearby roads (particularly where lorries are obliged to park whilst awaiting site access) also affects other properties not directly exposed to noise from the actual site. Greggs have confirmed that complaints from neighbouring properties regarding noise disturbance have been and are common, with noise associated with vehicles on the site and on the nearby roads frequently cited as being the cause.

In order to assess the extent to which neighbouring properties are affected it would be necessary to measure the noise climate prevailing on the site in the absence of noise emissions from or associated with the bakery. However, given the intensity of the current use this is not possible, and therefore an estimate of the likely average ambient noise levels on the site has been derived based on sample measurements taken in nearby locations not affected by noise emissions from the bakery. Sample measurements were taken at locations in May Road (approximately 120m to the west of the site) and in Warwick Road (approximately 70m to the east of the site). Based on the results of these measurements the following values have been estimated:

Time Period	Estimated Average Ambient Noise Level
07.00 - 23.00	55 dB, L_{Aeq}, 46 dB L_{A90}
23.00 - 07.00	50 dB L_{Aeq}, 41 dB L_{A90}

The significance of noise emissions from industrial sites can be evaluated with reference to British Standard BS 4142:2014 *Methods for rating and assessing industrial and commercial sound*. This essentially entails comparing the rating level of the sound source (the noise level of the source being assessed plus a range of possible character corrections) at the relevant location to the average otherwise prevailing background noise level. The Standard provides the following guidance:

a) *Typically, the greater the difference, the greater the greater the magnitude of the impact.*
b) *A difference of around +10 dB or more is likely to be an indication of a significant adverse impact, depending on the context.*
c) *A difference of around +5 dB is likely to be an indication of an adverse impact, depending on context.*
d) *The lower the rating level is relative to the measured background sound level, the less likely it is that the specific sound source will have an adverse impact or a significant adverse impact. Where the rating level does not exceed the background sound level, this is an indication of the specific sound source having a low impact, depending on context.*

With regard to the corrections to be applied for the character of the noise source, the Standard states:

> *Certain acoustic features can increase the significance of impact over that expected from a basic comparison between the specific sound level and the background sound level. Where such features are present at the assessment location, add a character correction to the specific sound level to obtain the rating level.*

With regard to tonality:

> *For sound ranging from not tonal to prominently tonal the Joint Nordic Method gives a correction of between 0 dB +6 dB for tonality. Subjectively, this can be converted to a penalty of 2 dB for a tone which is just perceptible at the noise receptor, 4 dB where it is clearly perceptible, and 6 dB where it is highly perceptible.*

With regard to impulsivity:

> *A correction of up to +9 dB for sound that is highly impulsive, considering both the rapidity of the change in sound level and the overall change in sound level. Subjectively, this can be converted to a penalty of 3 dB impulsivity which is just perceptible at the noise receptor, 6 dB where it is clearly perceptible, and 9 dB where it is highly perceptible.*

With regard to intermittency:

> *.....If the intermittency is readily distinctive against the residual acoustic environment, a penalty of 3 dB can be applied.*

Given the varying nature and number of noise generating sources operating at any given time on the site, a full and detailed BS 4142 assessment would be a complicated and time consuming exercise which, given our subjective observations and the historic noise complaints record, is not necessary in the context of the current general evaluation. Therefore, in order to gain an indication of the likely situation with respect to the Standard, the noise levels anticipated at the rear elevations of the central and southern areas of the residential properties fronting Crane Road and Norcutt Road have been considered.

Based on the results of the environmental noise survey of the site and taking the above factors relating to character corrections into account, the following rating noise levels at the rear elevations of the houses are estimated:

Time Period	Rating Noise Level
Day (07.00 - 23.00)	70 dB
Night (23.00 - 07.00)	61 dB

With reference to the previously discussed estimated average ambient site noise levels, the above values correspond to differences of + 24 dB and 20 dB for the daytime and nigh time periods, respectively. This is a clear indication that an assessment in accordance with BS 4142 is likely to demonstrate a significant adverse impact at nearby residential properties, and therefore reinforces the subjective impression and circumstantial evidence pointing to the fact that noise from the existing use is having a substantial impact on residential amenity.

8 PROPOSED DEVELOPMENT

The current proposed scheme envisages low rise residential accommodation over most of the site with a slightly larger residential building and a commercial (office) building at the northern end of the site. It is reasonable to assume that with the exception of the north elevations of the buildings at the northern end of the site (which are likely to experience somewhat elevated noise levels due to train movements), all other proposed buildings are likely to be subject to noise levels of the

order of the estimated average ambient noise levels discussed in section 7 above, and that during periods of easterly operations at Heathrow airport some aircraft fly-over events may take place during the night time period. With regard to the north elevations of the proposed properties at the northern end of the site, it might be assumed that these areas will be exposed to noise levels as measured at position 3 of the environmental noise survey, although this is probably pessimistic since the measured noise levels were not just due to the railway but in fact were also influenced by noise from the current bakery use.

Therefore on this basis an assessment to determine whether the anticipated noise levels on the site will be compatible with the proposed uses has been undertaken.

8.1 Acoustic Design Targets

Recommendations for indoor ambient noise levels within residential accommodation are given in Table 4 of BS 8233:2014 *Guidance on sound insulation and noise reduction for buildings,* which is reproduced below:

Table 4 Indoor ambient noise levels for dwellings

Activity	Location	07.00 – 23.00	23.00 – 07.00
Resting	Living room	35 dB $L_{Aeq,\ 16\ hour}$	–
Dining	Dining room/area	40 dB $L_{Aeq,\ 16\ hour}$	–
Sleeping (daytime resting)	Bedroom	35 dB $L_{Aeq,\ 16\ hour}$	30 dB $L_{Aeq,\ 8\ hour}$

It is suggested that in order to ensure the satisfactory amenity of future residents, the above values should be adopted as design targets for the control of external noise intrusion into the residential parts of the proposed development, and that adoption of these values would therefore constitute compliance with the National and Local planning policy outlined above.

It should be noted that the Standard does not provide specific guidance with respect to L_{max} noise levels in bedrooms at night, however the following guidance is given in Note 4 to the Table:

> *NOTE 4 Regular individual noise events (for example, scheduled aircraft or passing trains) can cause sleep disturbance. A guideline value may be set in terms of SEL or $L_{Amax,F}$ depending on the character and number of events per night. Sporadic noise events could require separate values.*

WHO guidelines (on which the guidance in this particular section of BS 8233 is largely based) suggest that during the night time period, sleep disturbance could be anticipated where L_{Amax} noise levels within bedrooms regularly exceed 45 dB. We would therefore suggest that a value of 45 dB $L_{Amax, fast}$ should be adopted for typically occurring individual noise events within residential bedrooms at night, but in the spirit of the guidance expressed in BS 8233, this should be considered a guideline target rather than a rigid, not to be exceeded criterion.

With regard to offices, BS 8233 gives a design range for the internal noise level within an "executive office" of 35 - 40 dB $L_{Aeq, T}$, and for the accommodation of the type proposed it is suggested that the upper end of this range would be appropriate.

8.2 Assessment Of Noise Intrusion

Based on the measured and estimated daytime and night-time sound levels, the following sound reduction performance requirements for the external building fabric have been calculated in order to control noise intrusion in accordance with the above design targets:

Room Type	Required Sound Insulation, dB(A)	
	Facades overlooking central locations	Facades overlooking railway
Living rooms - Daytime ($L_{Aeq,16hour}$)	20	27
Bedrooms - Night-time ($L_{Aeq,8hour}$)	20	27
Bedrooms - Night-time ($L_{Amax,fast}$)	29	34
Offices - Daytime ($L_{Aeq,16hour}$)	10	22

For most building façades, the control of noise transmission through glazed elements will be the most important factor affecting the overall outside-to-inside sound insulation. Whilst the NPPF has superseded earlier governmental advice contained within PPG24, much of the technical guidance set out in that document still remains relevant. In particular, Annex 6 of PPG 24 provides the following guidance with regard to the typical outside-to-inside noise reduction expected from windows in a dense façade for a variety of noise sources. From the table above it can be seen that

that the highest requirements are those needed to achieve the night time L_{Amax} design target. For electric trains (relevant to the facades overlooking the railway) and for civil aircraft (relevant to all other facades), the following guidance is given:

Noise Source	Difference Between dB(A) Levels Outside and Inside		
	Single glazing	Thermal double glazing	Secondary glazing
Electric Train	30 dB(A)	36 dB(A)	41 dB(A)
Civil Aircraft	27 dB(A)	32 dB(A)	35 dB(A)

It can be seen that in all cases the use of "thermal double glazing" would adequately control noise intrusion into residential rooms, and into the office accommodation. In order to comply with other sustainability requirements, it is highly likely that all windows will include thermal double glazed units, and therefore this will also ensure that adequate control of external noise intrusion can be achieved.

Notwithstanding the above conclusion, it will be readily appreciated that the sound insulation of windows will reduce when they are open. Guidance given in Annex 6 of PPG 24 suggests that the sound insulation provided by any window "when partially open" will be in the region of 10-15dB(A). As such, it is clear that whilst thermal double glazing can be selected to provide an adequate level of acoustic protection against traffic noise, it will only maintain reasonable internal noise levels when closed. In view of this, alternative means of ventilation will need to be provided to enable future occupants to have the option of keeping windows shut, whilst maintaining an appropriate level of ventilation. Alternative means of ventilation could include a mechanical ventilation strategy (such as the use of whole house heat recovery system) or the use of an acoustically rated passive ventilation strategy.

9 CONCLUSIONS

The site is currently very intensively used both in terms of the level of site activity (the current bakery activities ceasing only for a brief period on Saturday evening through to 6 am on Sunday morning), and the extent to which the site is physically occupied. Site activities (both bakery

processes and the loading, unloading, and movement of refrigerated lorries) generate significant noise levels, and noise emissions from the site have in the past and into the present resulted in complaints from residential neighbours. Residential properties in other nearby roads are also reportedly affected by noise from vehicles accessing or leaving the site and from vehicles obliged to wait in the roads until space becomes available on site.

An environmental noise survey has been undertaken to determine the noise levels currently generated on the site, and an assessment based on these results and other noise level measurements clearly indicates that noise emissions from the site are currently resulting in a significant adverse impact with respect to the amenity of the neighbouring residential properties.

The proposed development would not be expected to generate any significant noise emissions, and therefore in light of the above it is clear that the proposed change of use would result in a significant improvement to the amenity of residents in the area.

The site noise data have been further reviewed in the context of the guidance given in BS 8233: 2014, and it is concluded that environmental noise intrusion into the buildings on the proposed development will be adequately controlled by the use of the proposed thermal double glazed windows and alternative means of ventilation, and that the site is therefore suitable for the proposed use.

Christopher Hookway

APPENDIX A

1 Location Plan
Scale: 1:1250

0 5 10 15 20 M

1:1250

A3

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AYRE CHAMBERLAIN GAUNT

PROJECT
Gould Road
Twickenham

DRAWING TITLE
Location Plan

REV	DATE	NOTES
A	26.04.16	Issue for pre-planning application

DRAWN BY	CHECKED BY
AW	GW

JOB NO.	STATUS
216	Planning

DRAWING NO.	REV
216_PLN_001	A

APPENDIX B

1 Location Plan
Scale: 1:1250

0 5 10 15 20 M

1:1250

A3

NOTES:

Site application boundary

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PROJECT
Gould Road
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DRAWING TITLE
Location Plan

REV	DATE	NOTES
A	25.7.18	Issue for pre-planning application

DRAWN BY	CHECKED BY
AW	GW

JOB NO.	STATUS
216	Planning

DRAWING NO.	REV
216_PLN_001	A

APPENDIX C

GLOSSARY OF ACOUSTIC TERMINOLOGY

General

A vibrating surface or turbulent fluid flow will cause pressure fluctuations in the surrounding air. These pressure fluctuations are perceived by the human ear as "sound".

Measurement Units

The human ear can detect sound pressures as low as about 20 μPa, and can tolerate (for short periods) sound pressures as high as 200 Pa, an amplitude range of 10 million times. To take account of this huge amplitude range, sound pressure levels (often written in "acoustic shorthand" as SPL or Lp) are quantified using a logarithmic scale, the decibel (dB) scale. This is based on a reference pressure of 20μPa, thus a sound pressure of 20μPa would equate to 0dB and a pressure of 200Pa would equate to 140dB.

Frequency (Pitch) Characteristics

The sound received at any particular location is not solely influenced by the sound pressure level, the frequency characteristics (pitch) of the noise is also an important factor. Noise audible to a human (with "normal" hearing), typically covers the frequency range 20 Hertz to 20,000 Hertz. Hertz (Hz) are defined as the number of times the sound pressure fluctuates in one second. "Low" pitched sounds fluctuate less times per second than "high" pitched sounds. Whilst humans are capable of detecting a wide range of frequencies, the ear is not equally sensitive to all frequencies – the ear is most sensitive at frequencies towards the middle of the audible range and less sensitive to the lower and higher frequencies.

To take account of this frequency response, sound pressure fluctuations are normally quantified by applying a frequency-weighting network or filter which simulates the frequency response of the ear. In essence, this means that more significance is given to the frequencies at which the ear is most sensitive and less significance to those at which the ear is less sensitive. Noise measurements relating to human reaction are generally made using an "A-weighting" network. These measurements are reported as A-weighted decibels or dB(A). The A-weighted sound pressure level is written in "acoustic shorthand" as L_A.

Variation of Sound with Time

It will be appreciated that the sound pressure level of most noise sources will fluctuate with time. In order to take account of the way in which the human ear perceives noise, it is normal for the sound pressure level to be quantified using a time weighting network, to mimic the speed of response of the human ear. The standardised setting for most types of noise is a "Fast" time weighting.

The manner in which sound fluctuates with time can also influence the subjective manner in which noise is perceived. Noise can be continuous (showing no significant variation with time as in the case of a fan), intermittent (i.e. the noise is transient in it's nature, such as a train pass-by) or impulsive (i.e. there is a sudden build up of noise - this can range from "clanking" types sounds as might be experienced next to railway goods yard or a high energy discharge such as an explosion)

Measurement of Sound

Sound pressure levels are measured using equipment comprising a pressure-sensitive microphone, associated amplifier, frequency weighting network, time weighted network and output indicator. In its simplest form this is a small hand-held instrument called a sound level meter. More sophisticated instrumentation (a sound level analyser) is also available which allows the real-time output of the frequency characteristics of the sound to be quantified.

Comparison of Sound Levels

To put the significance of noise measurement into context, the following Table presents the A-weighted sound pressure level of some typical sources:

Sound Pressure Level, dB(A)	Typical Noise Source . Activity
160	Saturn Rocket Taking Off
140	Military Jet Taking Off at 30m
100	Nightclub
90	Heavy goods vehicle driving past at 7m
80	Busy urban road
70	Domestic vacuum cleaner at 3m
60	Busy office environment
55	Normal speech at 1m
40	Whispered conversation at 2m
30	Bedroom at night (BS 8233: 1999)
20	Remote country location
0	Threshold of hearing – a very eery silence

Addition of Sound Levels

It is important to note that the use of a logarithmic scale to describe noise does not allow normal arithmetic addition. This means that two noise sources each generating a level of, say, 60dB(A) will not generate a combined sound level of 120dB(A). The values must be added logarithmically, which would actually yield a combined sound level of 63dB(A) in this example.

Subjective Perception of Sound Levels Changes

With regard to the human perception of sound level changes, the human ear:

- Cannot generally perceive a sound level difference of less than 3dB(A)
- Will perceive a sound level difference of 4-5dB(A) as "noticeable"
- Will perceive a sound level difference of 10dB(A) as a doubling (or halving) of loudness.

GLOSSARY OF ACOUSTIC TERMINOLOGY

Acoustic Terminology

As stated previously, most sources of noise will fluctuate with time. In order to characterize such noise, it is therefore normal to represent the noise climate using a variety of noise parameters and statistical indices. The most commonly adopted noise parameters are described below:

$L_{Aeq,T}$ This is the equivalent continuous A-weighted sound level measured over a specified time period "T". This is the notional continuous sound level which, over the time T, contains the same amount of energy as the actual fluctuating sound being measured. This parameter is widely accepted as being the most appropriate noise descriptor for most environmental noise and the effects of noise on humans.

$L_{Amax,fast}$ This is maximum A-weighted sound pressure measured with a fast frequency response recorded during the stated measurement period. It is typically used to characterise the highest sound level caused during a noise event.

$L_{A90,T}$ This is the A-weighted sound pressure level exceeded for 90% of the specified time period "T". It is normally used to describe the underlying background noise level of an environment since it inherently excludes the effects of transient noise sources.

Noise Rating (NR) Level

When describing noise from building services installations, it is common to express noise levels in terms of a Noise Rating (NR) Level. The NR level is determined by plotting the measured frequency spectrum of a noise against a series of reference curves, which roughly approximate to equal loudness values. This method permits higher sound levels at low frequencies corresponding to the sensitivity of the human ear. The NR level is defined as the value of the highest curve "touched" by the plotted frequency spectrum. For typical sources of building services noise, the overall A-weighted sound level is numerically around 5-6dB higher than the NR level of the noise.

Airborne Sound Insulation Measurement Parameters

The ability of a building element to reduce airborne noise can be described by a number of different parameters relevant to both laboratory and on-site performance evaluation. In general, the higher these values, the better the resistance of the construction to the transmission of airborne sound. The most commonly used parameters include:

R_w The **"Weighted Sound Reduction Index"** (R_w) is a single value measure of the intrinsic sound reduction capabilities of a construction, as measured in an acoustic laboratory. Measurement values are determined in accordance with the BS EN ISO 10140 series of standards and weighted in accordance with BS EN ISO 717-1: 1997.

R'_w The **"Weighted Apparent Sound Reduction Index"** (R'_w) is a single value measure of the apparent sound reduction capabilities of a construction, when installed on-site (which will normally be some way lower than the laboratory value due to less favourable installation conditions, the quality of workmanship, etc.). Measurement values are determined in accordance with the BS EN ISO 140-4: 1998 and weighted in accordance with BS EN ISO 717-1: 1997. In practice, the R'_w of a construction can only be reliably determined if "direct" sound transfer through the partition can confidently be taken as the dominant noise transfer path (i.e. there is no "flanking" sound transmission.

D_w The **"Weighted Sound Level Difference"** (D_w) is a single value measure of the on-site sound reduction between two rooms. This value inherently includes "direct" sound transmission through any separating construction and "flanking" transmission through other building elements. Measurement values are determined in accordance with BS EN ISO 140-4: 1998 and weighted in accordance with BS EN ISO 717-1: 1997.

$D_{n,fw}$ The "**Weighted Normalised Flanking Level Difference**" ($D_{nf,w}$) is a single figure measure of the sound reduction between two rooms solely due to sound transmission through a specified flanking path. This parameter is frequently used to provide an indication of the sound reduction capabilities of suspended ceiling and raised access floor constructions where there is common void between adjacent rooms or as a measure of sound that may be transmitted between rooms through external curtain walling. Measurements are undertaken in accordance with BS EN ISO 10848-2: 2006 and weighted in accordance with BS EN ISO 717-1: 1997

Impact Sound Insulation Measurement Parameters

Some building elements also have the potential to generate "impact" noise, for example due to human "footfall" on floor structures, or the impact of rainfall on lightweight roofing components. A variety of parameters are again available to define the amount of noise likely to be generated. In general, the lower these values, the less sound the construction will generate as a result of impacts. Typical measurements parameters include:

$L_{nT,w}$ The "**Standardised Impact Sound Pressure Level**" is a "single number" rating describing the intrinsic impact sound insulation capabilities of a construction (such as a floor system) as measured in an acoustics laboratory. Values are determined in a vertical sound transmission suite by locating a "tapping machine" in the upper room of the suite and measuring the amount of sound radiated by the floor in the room below. Measurement values are determined in accordance with the BS EN ISO 10140 series of standards and weighted in accordance with BS EN ISO 717-2: 1997.

$L_{nf,w}$ The "**Normalised Flanking Impact Sound Pressure Level**" is a "single number" rating describing the amount of flanking sound that would be transmitted to an adjoining space (separated by a partition) due to impacts on the test sample. It is, for example, used to indicate the amount of noise that may be generated due to footfall noise on a raised access floor system. Values are determined in a horizontal sound transmission suite by locating a "tapping machine" one side of a separating partition built off the test sample and measuring the amount of noise radiated by the floor in the adjoining space on the other side of the partition. Measurement values are determined in accordance with BS EN ISO 10848-2: 2006 and weighted in accordance with BS EN ISO 717-2: 1997.

Room Acoustic Measurements

T The "**Reverberation Time**" (T) of a room is defined as the time taken for the sound energy produced by a source Time (RT)to decay by 60 dB after the source has been switched off. The reverberation time of a space can be calculated by considering the volume of the room and the areas and sound absorption qualities of room surface finishes. Small, "soft" rooms tend to give low reverberation times, whilst large, "hard" rooms tend to give long reverberation times.

α_p The "**Practical Acoustic Absorption Coefficient**" (α_p) is a measure of how much sound energy is absorbed by a building element at a particular frequency, as measured in accordance with BS EN ISO 354: 2003.

α_w The "**Weighted Absorption Coefficient**" (α_w) is a single figure measure of the overall sound absorption capabilities of a building element determined in accordance with BS EN ISO 11654: 1997.

APPENDIX D

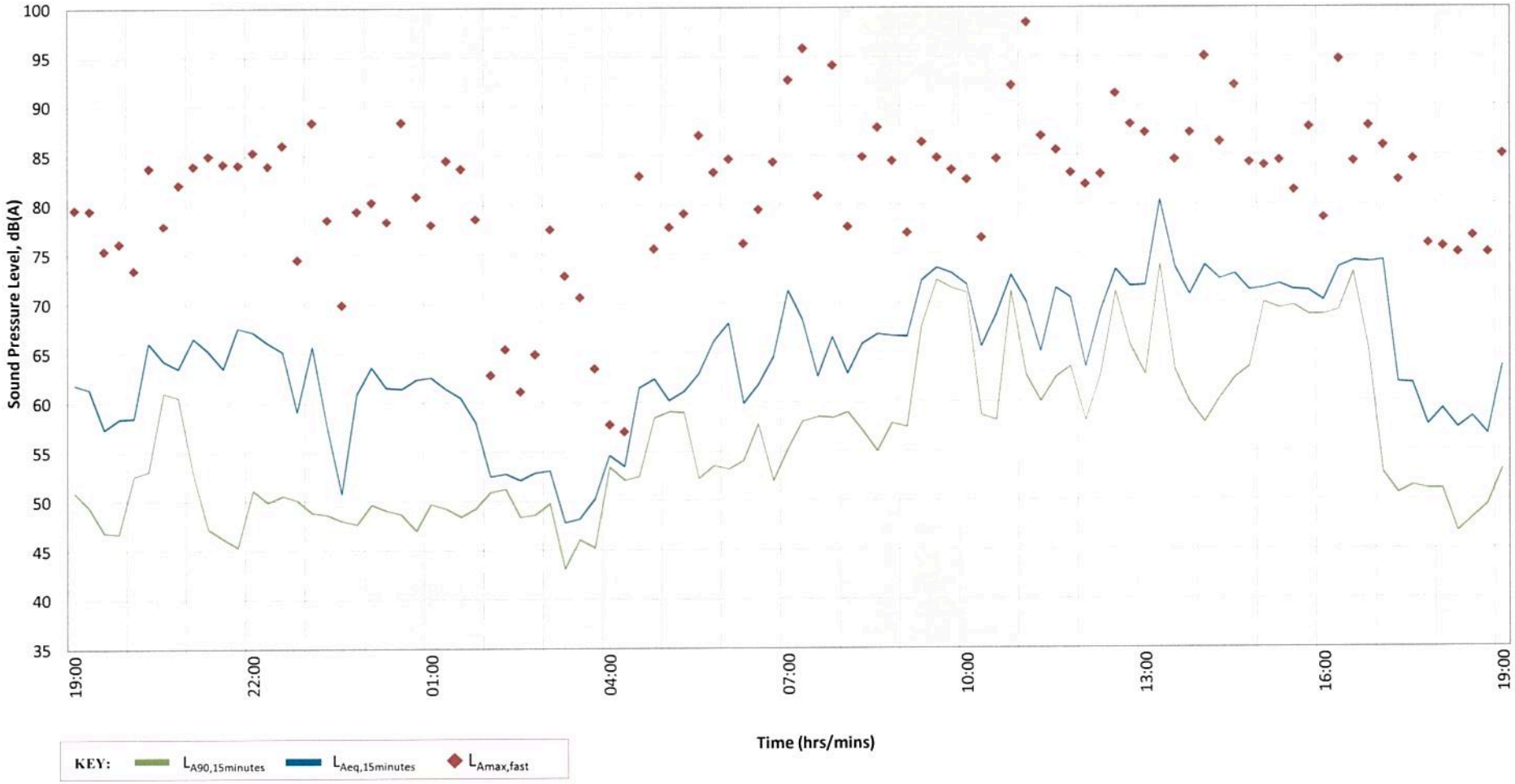
GREGGS BAKERY SITE - GOULD ROAD TWICKENHAM

THE EQUUS PARTNERSHIP
Member of the Association of Noise Consultants
CONSULTANTS IN ACOUSTICS

TIME HISTORY GRAPH 6564/TH1

Results of Automated Noise Measurements at Position 1

Survey Date: 20-21 April 2016



GREGGS BAKERY SITE - GOULD ROAD TWICKENHAM

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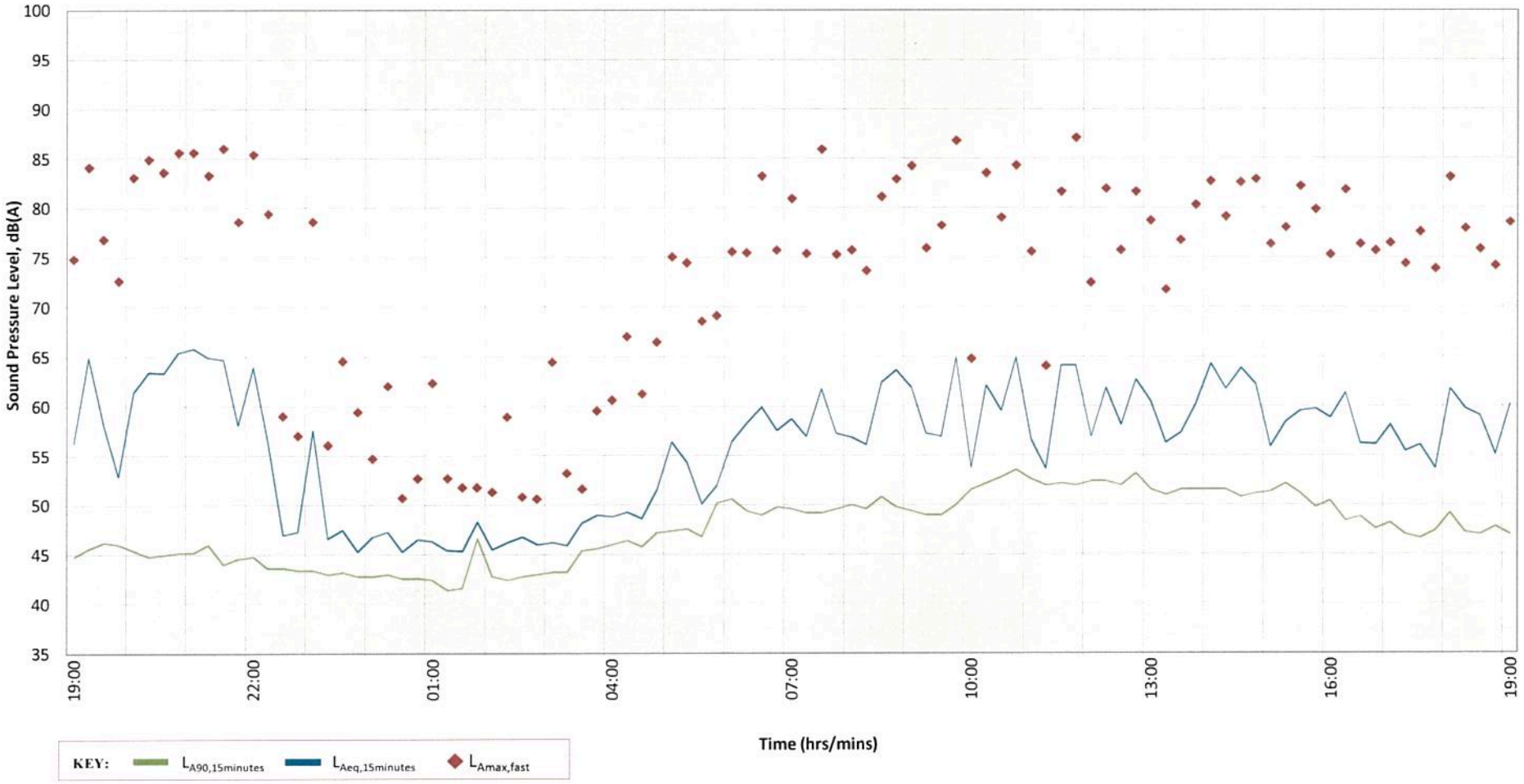
CONSULTANTS IN ACOUSTICS

TIME HISTORY GRAPH 6564/TH2

Results of Automated Noise Measurements at Position 2

Survey Date: 20-21 April 2016



GREGGS BAKERY SITE - GOULD ROAD TWICKENHAM

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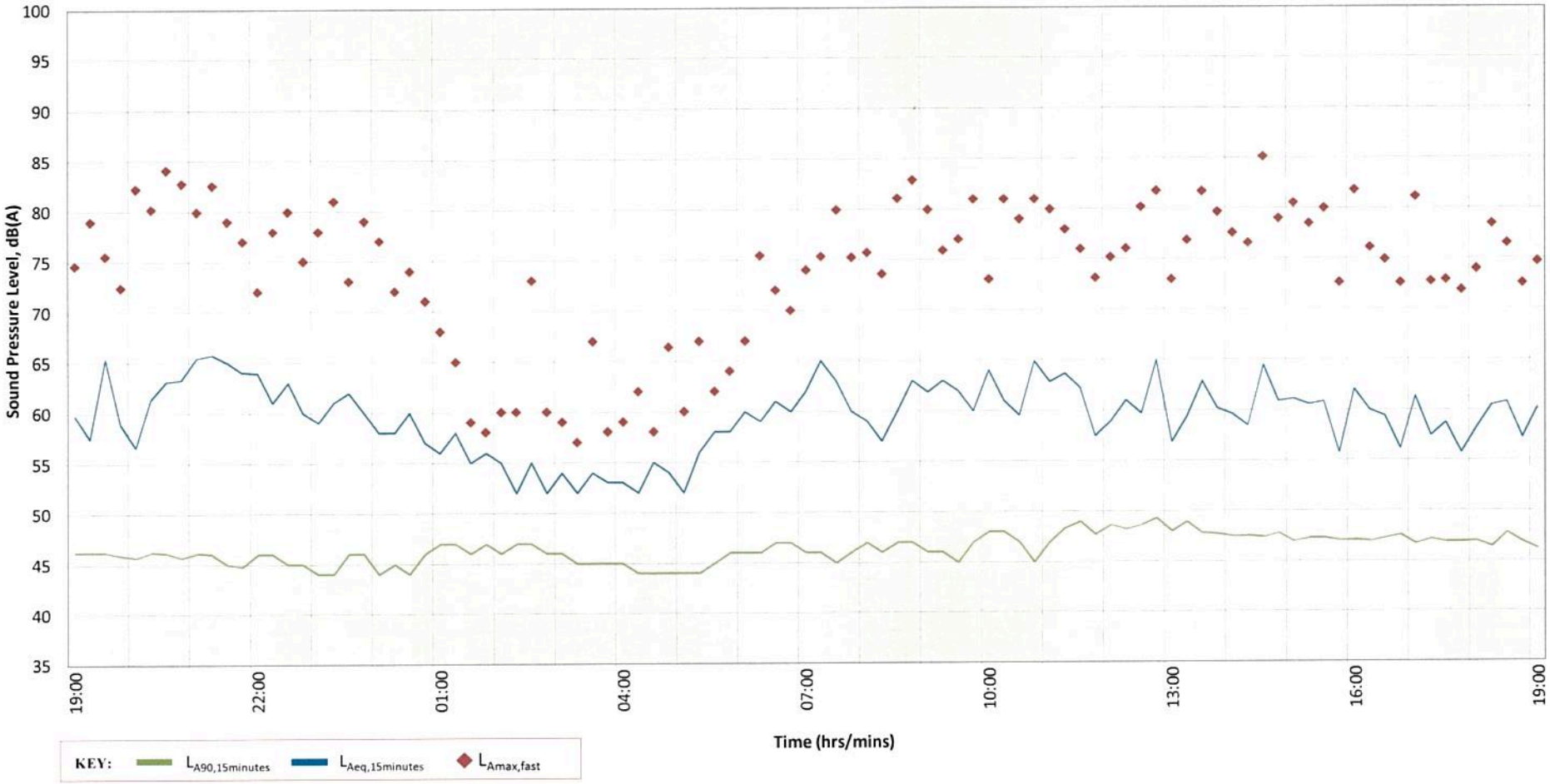
TIME HISTORY GRAPH 6564/TH3

Results of Automated Noise Measurements at Position 3

Survey Date: 20-21 April 2016



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19th August 2016

Ashley Ritchie
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Newcastle upon Tyne
NE2 1TL.

Dear Ashley,

GREGGS BAKERY, GOULD ROAD, TWICKENHAM TW2 6RT

I write further to your request to update my letter of 7th March 2016 in light of the recent report prepared by NLP. I can therefore confirm that we have reviewed the Employment Assessment Report undertaken by NLP in relation to your redundant and surplus site at Gould Road. Having done so, we consider the market commentary contained within the report to be correct. There is certainly good demand for industrial stock within the Borough of Richmond, by virtue of it being in limited supply. As such, there is a good case to support further industrial development in the wider Twickenham area.

However, I must stress that this does not change the nature of our previous advice. The problem is that the strong local market does not, in itself, improve the saleability of the site to an industrial investor or developer. This is because of the same site-specific constraints which we have raised as a concern with you previously. The rental values we see when reviewing the latest comparable evidence and considering these against the site constraints (shape, neighbouring uses and lack of frontage) make it unattractive to the majority of the market.

The local road network makes it difficult for HGV's to access the site without traffic conflicts occurring. Proximity to nearby residential properties are also likely to attract complaints from members of the public relating to noise, light and smells. Not only would these issues affect a potential occupier, as they have done Greggs historically, but they would also comprise significant barriers for a developer if the site was brought to market as an industrial redevelopment opportunity. In general terms the market demand in LB Richmond suggests this would be achievable, but the individual site characteristics does not provide this opportunity.

In order to ensure that our advice to you is robust, we have also revisited the feasibility work which we undertook in conjunction with your architect, ACG, to explore industrial redevelopment options for the site earlier this year. Our view remains that the Local Planning Authority would be likely to significantly restrict the amount of industrial development that could be achieved as part of a new-build scheme in order to avoid the historic and current conflicts which arise by virtue of its location and changes in parking policy (such as the proposed CPZ). It is also likely that there will be restrictions on hours of use, anything less than a 24-hour operation allowance will deter developers from the outset as this is becoming a minimum requirement and would have an impact on any potential pre-let activity. As before, we consider this would result in a smaller scheme with more restrictions over its use.

You should be aware that we have given this matter serious consideration. We are exceptionally active in the industrial market and have a market-leading position amongst other agents. We have had informal conversations with our developer clients and have used these to prepare various development appraisals analysing the site's redevelopment potential as an industrial location. Unfortunately, unlike other sites which we understand the LB Richmond is seeking to allocate as part of its current review, the amount of industrial floor space that could be accommodated on the site when considering a small industrial scheme means it is far less feasible here than elsewhere.

This is not to say that an industrial scheme at the site could not be profitable through various appraisals which may or may not be accepted by the LB Richmond's planners. However, the amount of developer profit (c.£1.1m) we believe is too small to attract the vast majority of industrial investors active in the market due to the considerable site constraints and hurdles which would be required to overcome and also considering that our appraisals are highly assumptive.

We should also note that in order to calculate this level of profit, we have made a series of assumptions which include a contingency fee (5%) and no cost whatsoever for land remediation. This is a significant risk as the historic industrial use of the property (not least that it currently contains a large amount of asbestos) could mean that the decontamination costs are high. It is our view that any prospective purchaser in the current market conditions would be those that assume they could secure a residential permission in order to mitigate these risks which have the potential to completely erode any profit.

I trust this provides a satisfactory clarification of the site's prospects as an industrial location in the current market and would be pleased to discuss any element with you further as required.

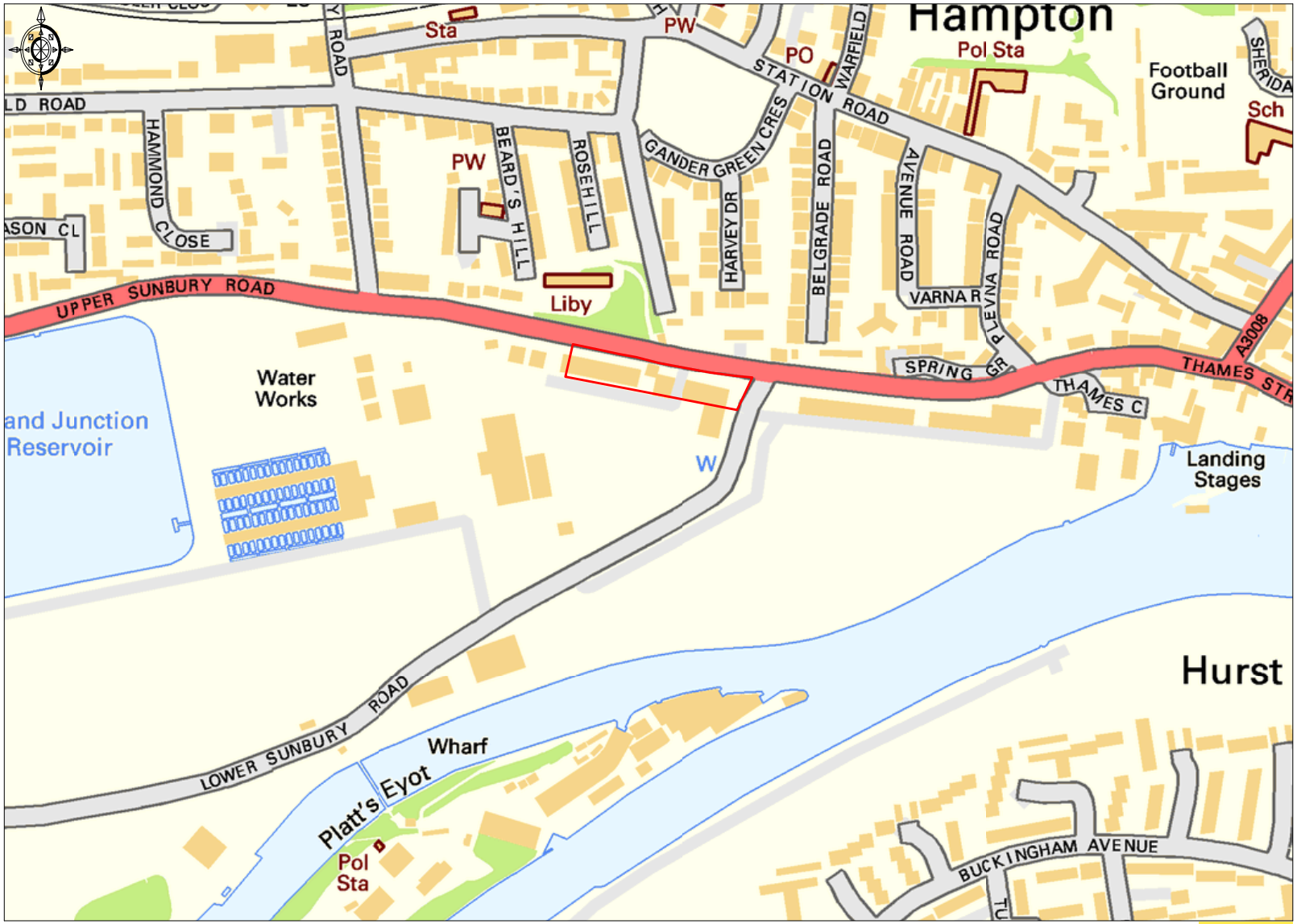
Yours sincerely,

pp

Steven Mitchell
DIRECTOR | INDUSTRIAL AND LOGISTICS

Hampton Water Treatment Works
Proposed Allocation (Saved UDP H1 as amended)

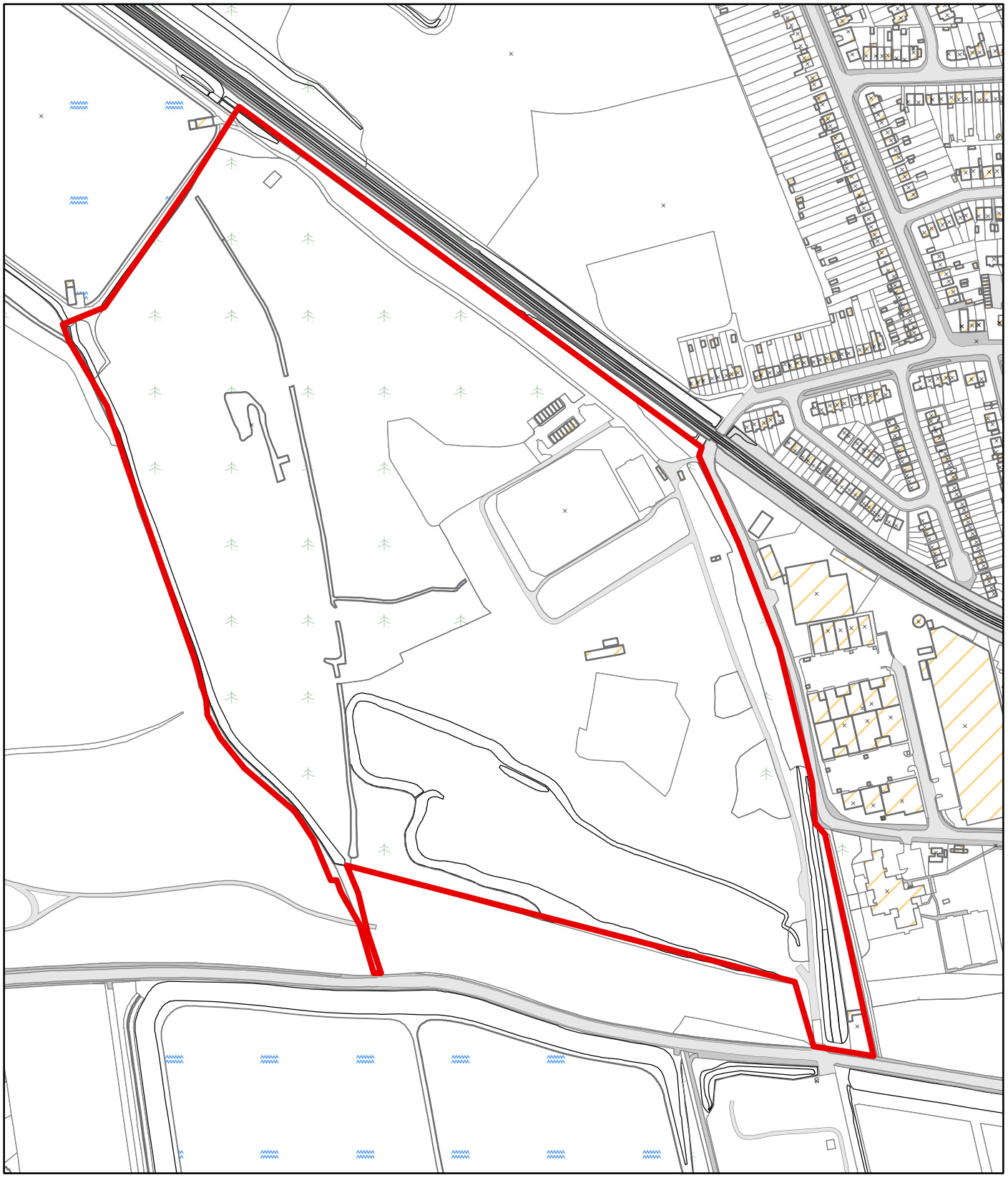
Hampton Water Treatment Works
Proposed Allocation (Karslake and Ruston Ward Buildings)



Promap®

savills

Hydes Field, Upper Sunbury Road (LB Richmond) - Site ref: TW15



Thames Water Map

Printed By : cbell
Print Date : 27/06/2016
Map Centre On : 512414, 169896
Centre Tile No. : TQ1269NW

Comments:

21.18 HECTARES

0 45 90 180 270 360 Meters

Current Scale : 1:3,997

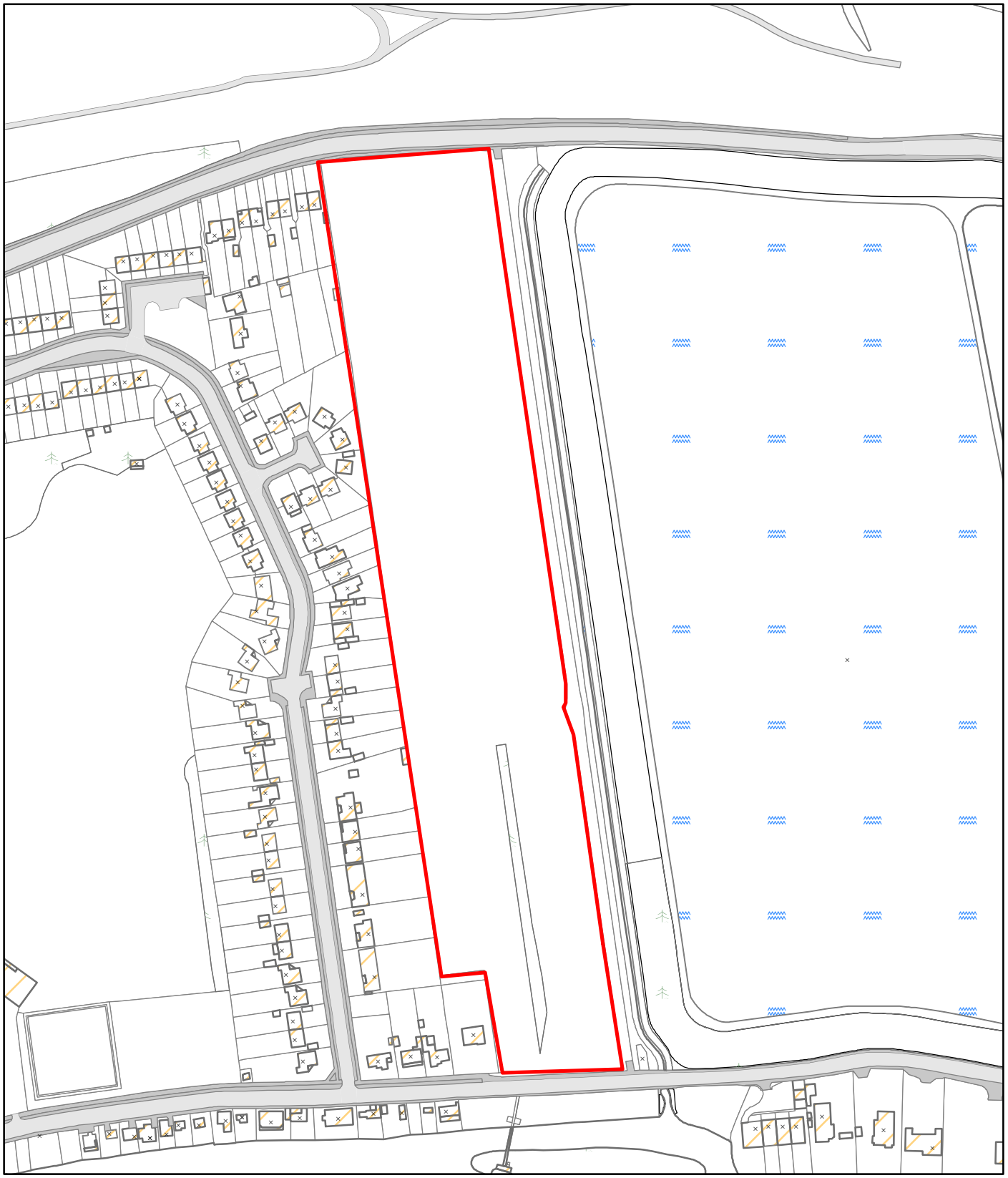
Disclaimer: Based on the Ordnance Survey Map with the Sanction of the Controller of H.M Stationery Office License Number:- 100019345

The position of any boundary or apparatus shown on this plan is given without obligation and warranty, and the accuracy cannot be guaranteed.

Service pipes are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Thames Water for any error or omission. The actual position of mains and services must be verified on site before any works are undertaken.

N

Land west of Stain Hill Reservoir, Lower Sunbury Road (LB Richmond) - Site ref: TW16



Thames Water Map

Printed By : cbell
Print Date : 27/06/2016
Map Centre On : 512126, 169390
Centre Tile No. : TQ1269SW

Comments:

3.58 HECTARES

0 30 60 120 180 240 Meters

Current Scale : 1:2,642

Disclaimer: Based on the Ordnance Survey Map with the Sanction of the Controller of H.M Stationery Office License Number:- 100019345

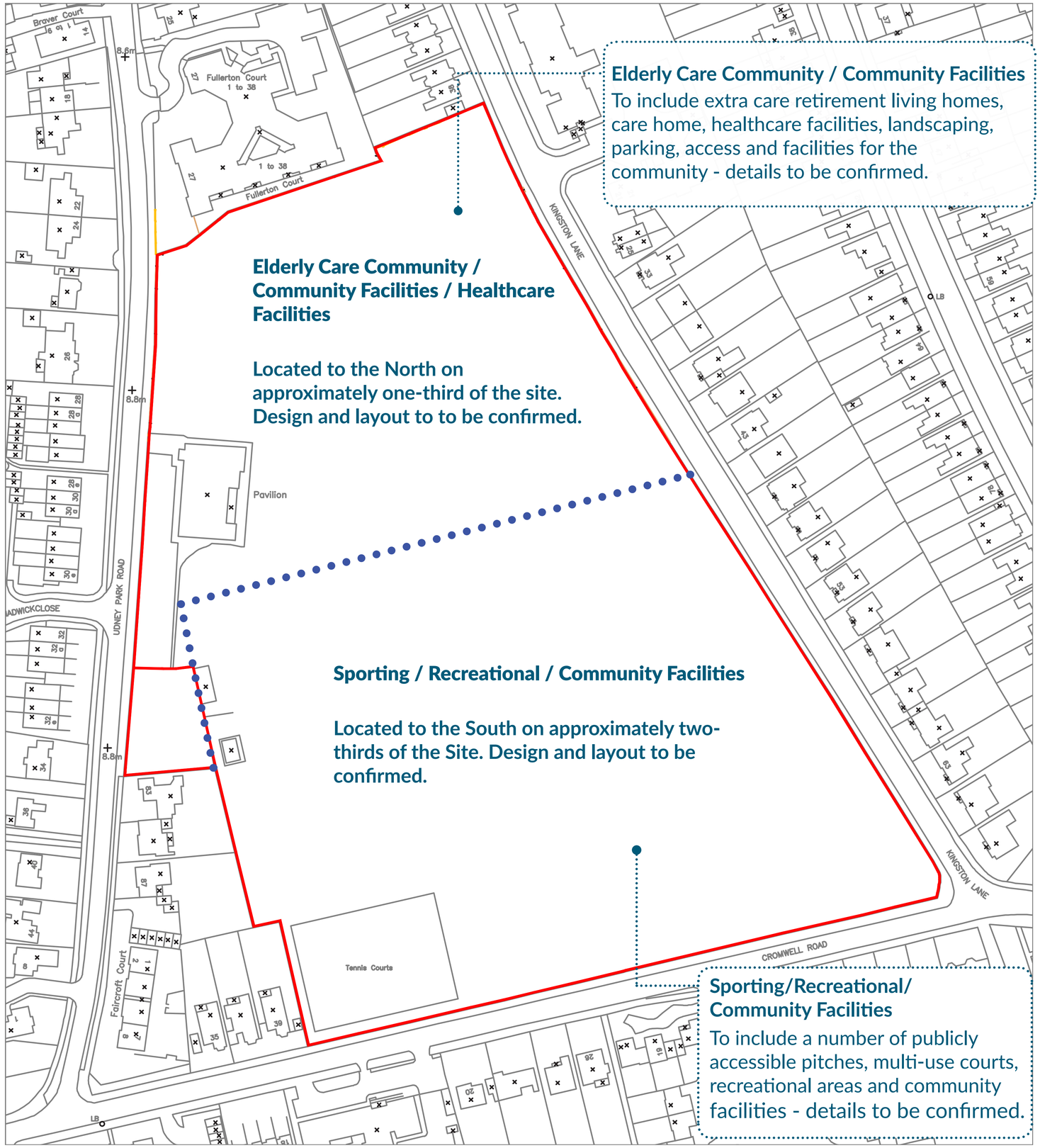
The position of any boundary or apparatus shown on this plan is given without obligation and warranty, and the accuracy cannot be guaranteed.

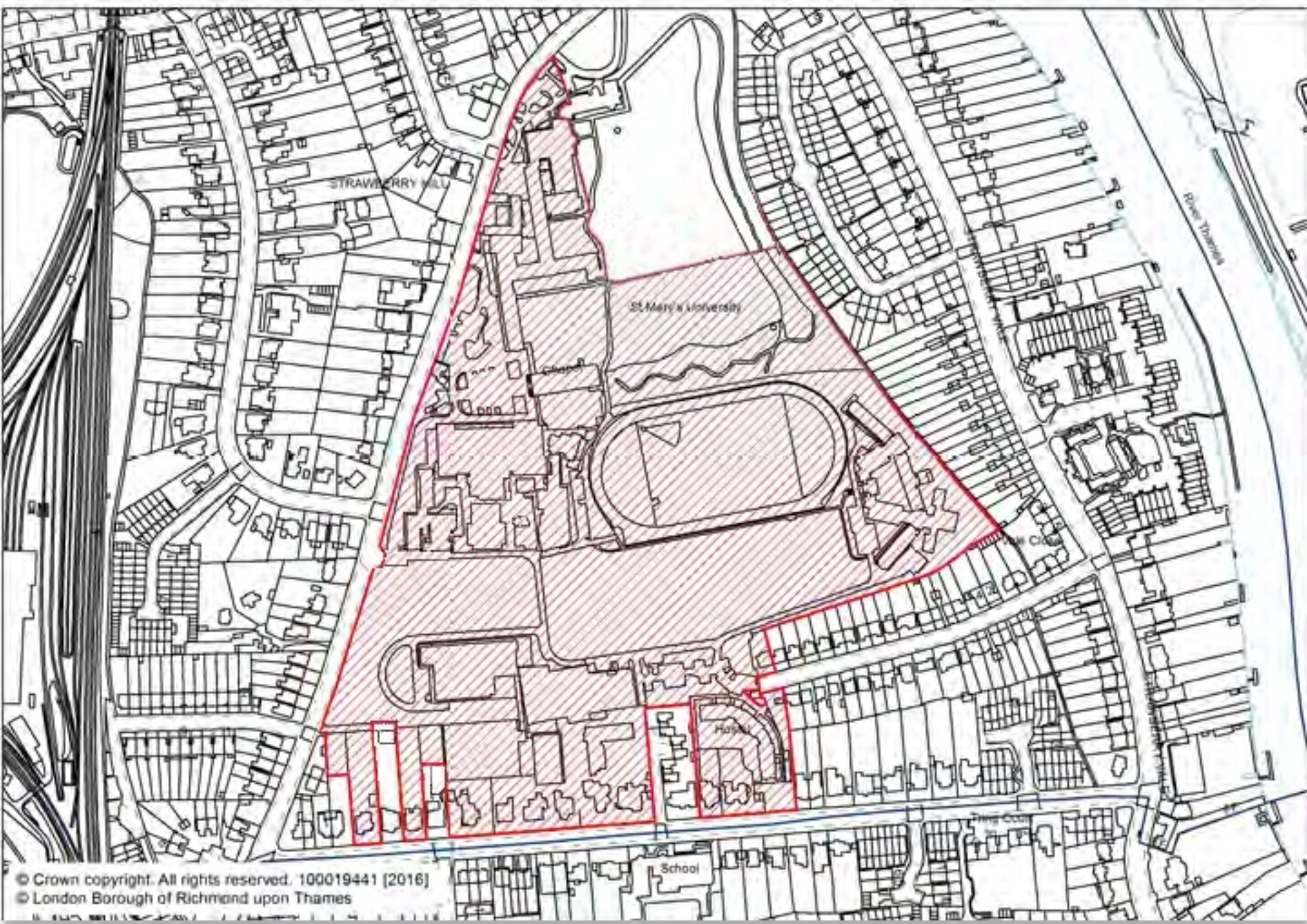
Service pipes are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Thames Water for any error or omission. The actual position of mains and services must be verified on site before any works are undertaken.

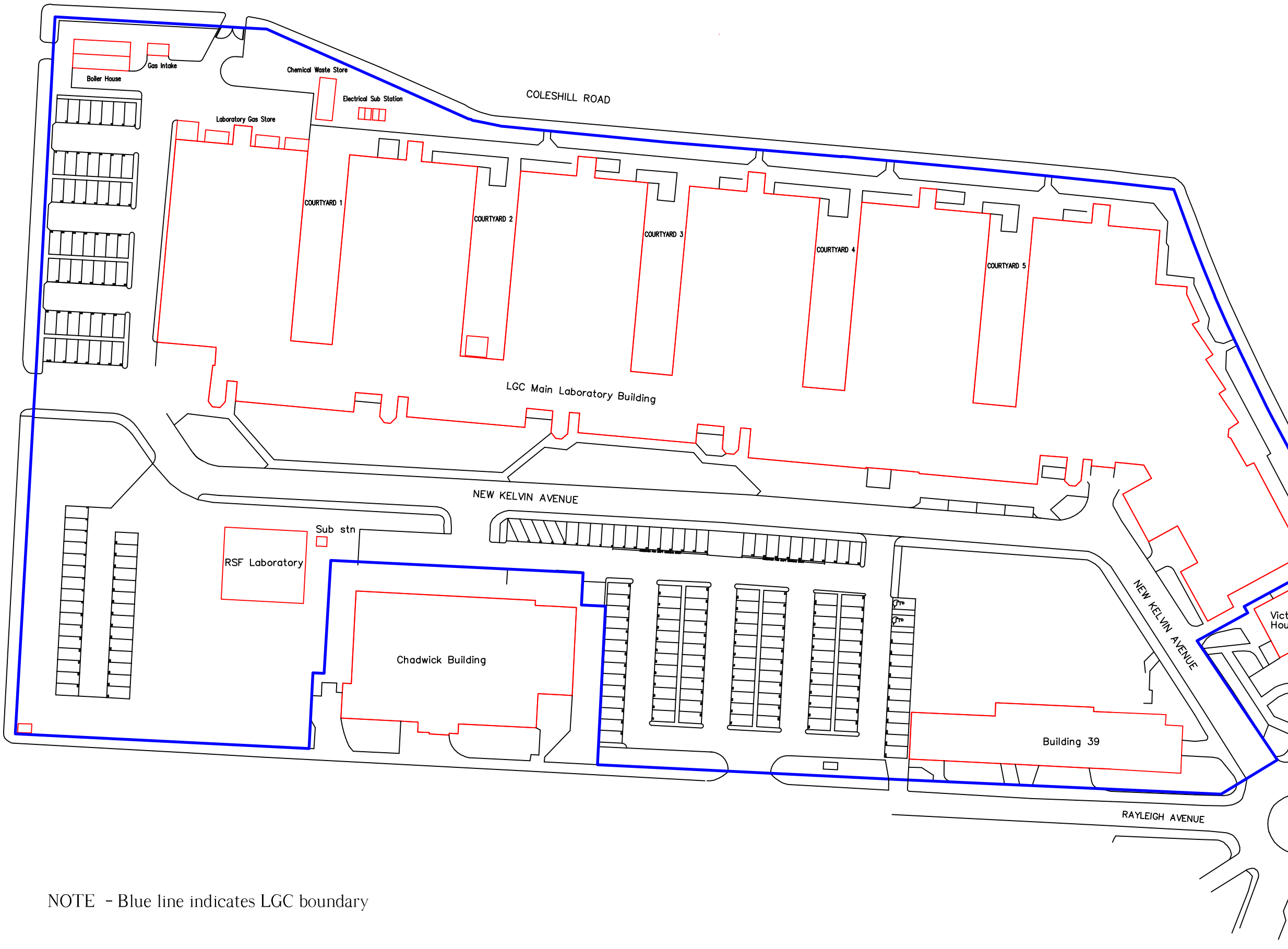
N

Site plan showing ownership boundary and indicative use zones to accompany Quantum Group's pre-publication consultation response form.

18th August 2016







NOTE - Blue line indicates LGC boundary

LGC Limited

Queens Road
Teddington
Middx TW11 0LY

tel. 020 8943 7000
fax. 020 8943 2767

Drawing Title
LGC Estate

Drawing Number
LGC-99-BS20-001

Date 14.1.99

Revision Date 27.01.2016

Drawn by DWS

Notes
Net area of main building 11500 m2.
Total site area 8.12 acres.

CBRE Limited
Henrietta House
Henrietta Place
London W1G 0NB

Switchboard +44 (0)20 7182 2000
Fax +44 (0)20 7182 2001
Direct Line +44 (0)20 7182 2752
jonathan.stoddart@cbre.com

28th January 2016

Planning Policy, LB Richmond
Civic Centre, 44 York Street
Twickenham
TW1 3BZ

Dear Sir/Madam

Consultation on the Scope for the Review of the Policies

Re: National Physical Laboratory draft Allocation – Local Plan Consultation December 2015

We write on behalf of our client LGC and in response to the above consultation.

LGC was founded in 1996 following the privatisation of the Laboratory of the Government Chemist. The company's headquarters is located on Queens Road in Teddington; a site plan is enclosed (herewith known as 'the site'). The site is incorrectly identified within the consultation draft plan under the demise of the National Physical Laboratory, Hampton Road, Teddington (p56).

The document seeks to protect the overall LGC site for 'proposed protection of key employment land'.

On behalf of our client we are seeking to remove the LGC site from the proposed employment allocation, and therefore formally disagree with the indicative identification of the NPL site as shown in Appendix 3 of the Local Plan consultation document. LGC's Teddington site is increasingly becoming unfit for purpose due to significant changes in LGC's business model, but more critically as a result of changes in customer requirements and the evolution of scientific techniques.

Due to the original design and construction methods used, the building has a higher operating cost than any other UK LGC site, which is unsustainable in the medium to longer term. These higher operating costs and inefficiencies are due to the facility originally being designed and built for wet chemistry laboratory operations. Over time, these scientific methods have changed considerably, particularly with the introduction of instrument based analytical methods (e.g. liquid & gas chromatography and mass spectrometry etc). Therefore, the site in its current form is now constraining LGC's operating model in Teddington rather than enabling delivery of the objectives that LGC wishes to achieve.

The site remains an important facility to LGC with its large local workforce and it is LGC's intention to retain the site as its group headquarters and part of its UK laboratory operations. However, we respectfully request that a new mixed-use site allocation is identified in the emerging plan.

The cost of upgrading the facilities is extremely high and a large portion of the site is potentially surplus to requirements. An initial evaluation of options has established that a part of the site can be brought forward for residential uses, with the remainder being used for developing a new purpose built facility on-site. We are keen to meet with the local authority in order to work through the potential options and set the parameters for housing numbers and employment floorspace.

In our view, the site lends itself well to a mix of employment and residential uses with the introduction of residential schemes off Bullard Road and the established housing on Coleshill Road. Indeed, two recent residential schemes included properties formerly owned by LGC on Queens Road (Elms Lodge and Victoria House). It is considered that car parking and site security can be addressed and there is no barrier to delivering a mixed use scheme in accordance with the National Planning Policy Framework.

It should be remembered that the UK Government originally invested in Teddington to be a home to world class scientific facilities and this investment was partly funded through the release of land for residential development. This investment enabled the creation and maintenance of high technology employment in the borough which LGC require options to maintain in order to sustain state of the art facilities to attract and retain the required calibre of scientific talent. The Teddington site has a rich scientific heritage and reputation and imposing planning constraints can only place this at future risk.

In summary, a proportion of the site is no longer required by LGC, whilst the facility requires substantial modernisation and structural change. It is therefore proposed that a mixed use residential/employment allocation would allow LGC the opportunity to have a presence in the area for the longer term

We respectfully request that you acknowledge that these representations have been received and shall be formally considered as part of this consultation process. If you require anything else please do let me know.

Yours faithfully

J.D. Stoddart

JONATHAN STODDART
DIRECTOR

CBRE

THE METROPOLITAN WATER BOARD RAILWAY SOCIETY.

Hampton to Kempton Narrow Gauge Railway.

An overview of the proposed project.

Introduction. The Metropolitan Water Board Railway Society (M.W.B.R.S.) was formed in 2003 with the aim of restoring the two-foot gauge railway, built in 1915, which used to carry coal from the River Thames Sunnyside Wharf to Kempton Park pumping station. The Society has the support of the Kempton Great Engines Trust (K.G.E.T.) who has restored and now operates the world's largest working steam engine under an agreement with Thames Water (T.W.). Restoration of the railway using steam traction as a passenger-carrying tourist railway will be an important addition to London's industrial heritage. The project will create a permanent recreational attraction and an educational amenity for the area.

1. Route. The original route stretched for about two miles. It started from an attractive stretch of the Thames, through the Hampton Waterworks, under the Upper Sunbury Road, into the recreational area of Hydes Field, alongside the Red House reservoir (properly called the Hampton Distributing Reservoir), crossed a bridleway known as Bunny Lane before entering the Kempton works and terminating close to the engine houses. All of the original track bed is on land owned or controlled by T.W.

2. Heritage. Most of the route passes through tracts of undeveloped land of the type that has vanished from many other places close to London. The pumping station at the Kempton end is already open to the public as the Kempton Steam Museum. It attracts hundreds of visitors on six or more steam weekends during a year and has ample car parking space close to the railway's proposed terminus. Unfortunately, the general public tend not to visit stationary steam engines more than once so visitor numbers depend on added attractions. The promise of a ride on a narrow-gauge preserved railway would boost visitor numbers and help to ensure the long-term viability of the Kempton Steam Museum.

3. Wildlife Viewing. There are places of interest that could be seen by passengers. The area adjacent to the Kempton Steam Museum (known as South Field) is largely undisturbed scrubland, with T.W. agreement railway passengers will be given access to their Kempton East Reservoir wetlands reserve and the Red House Reservoir is a Site of Special Scientific Interest. The route is largely inaccessible by other means of transport due to T.W. operational security, wildlife protection measures and pollution control regulations. Railways are officially considered to have minimal impact on the environment and several preserved railways provide access to S.S.S.I.s on their own land.

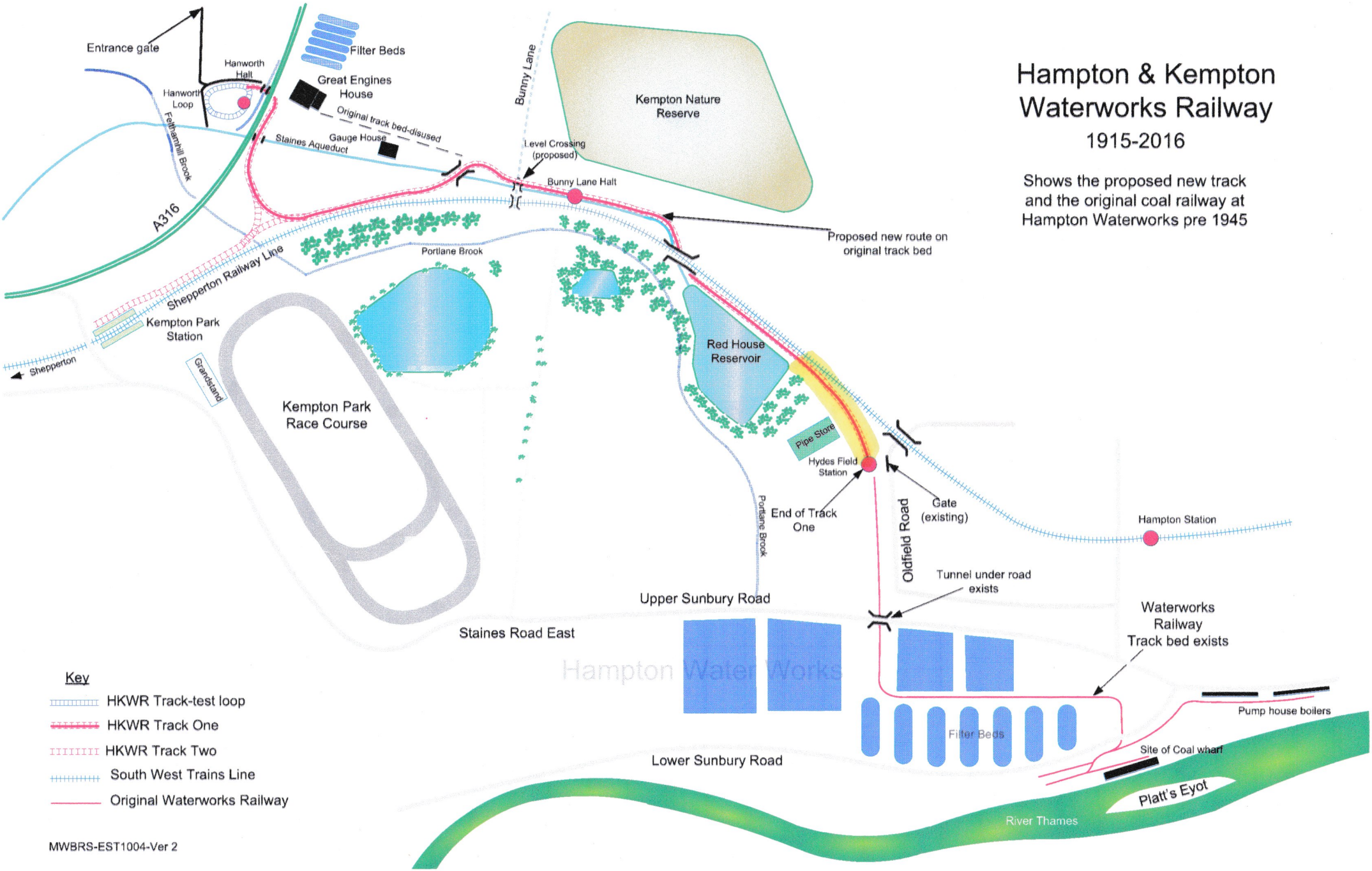
4. Recreation. Restored railways are popular attractions that bring in visitors from a wide area and many pay return visits. The involvement of the local community is very important because of the numbers of people and variety of voluntary tasks necessary for successful operation. There was some indication of the support that could materialise when in 1999 Thames Water held a development consultative meeting called the Hampton Thameside Forum where the idea of the railway restoration was the only proposal on the agenda that got a positive response from residents.

5. Education. Restored railways run by volunteers provide a range of educational opportunities. Apart from pure and economic history, there would be practical work experience in engineering, accounting, catering and human resources management. It will not be necessary to wait for the railway to be completed in order to realise these benefits. The early stages of reconstruction are known to attract young people who have little interest in railways for their own sake but enjoy a challenge and the idea of working as a team. Example; the Festiniog Railway "Deviationists".

6. Thames Water. In the past, senior management of T.W. have indicated support for the idea of a restored railway, with the exception of the section within the Hampton works where there are special security and safety concerns. Meetings with T.W. property management have been encouraging but progress has been slow because of the internal consultation process required and the changes of company ownership. The Kempton Great Engines Trust is handling the discussions aimed at obtaining a lease for all or part of the track bed mainly because they have the acquired expertise and are well known to T.W. management. The Trust has made it quite clear, however, that responsibility for fund raising, management and organisation of volunteers is the responsibility of the M.W.B.R.Society.

7. Local Authorities. The route is shared by three councils. From the River Thames through Hydes Field is in the London Borough of Richmond; the Red House reservoir section as far as the the Waterloo / Shepperton line bridge is in Spelthorne and the remainder is in the London Borough of Hounslow. Richmond have accepted the railway as part of a Unitary Development Plan (April 2004) to protect the track bed from developments within the T.W. Hampton treatment works area.

R.P.Marie.
Chairman,
M.W.B.R.S.
27th July 2009.


Hampton & Kempton Waterworks Railway
1915-2016
Shows the proposed new track and the original coal railway at Hampton Waterworks pre 1945
Entrance gate
Hanworth Halt
Hanworth Loop
Feltham Hill Brook
A316
Filter Beds
Great Engines House
Original track bed-disused
Gauge House
Staines Aqueduct
Bunny Lane
Kempton Nature Reserve
Level Crossing (proposed)
Bunny Lane Halt
Proposed new route on original track bed
Portlane Brook
Shepperton Railway Line
Kempton Park Station
Shepperton
Grandstand
Kempton Park Race Course
Red House Reservoir
Pipe Store
Hydes Field Station
End of Track One
Gate (existing)
Oldfield Road
Portlane Brook
Hampton Station
Tunnel under road exists
Upper Sunbury Road
Staines Road East
Waterworks Railway Track bed exists
Hampton Water Works
Filter Beds
Pump house boilers
Site of Coal wharf
Lower Sunbury Road
Platt's Eyot
River Thames
Key
HKWR Track-test loop
HKWR Track One
HKWR Track Two
South West Trains Line
Original Waterworks Railway
MWBRS-EST1004-Ver 2

1.1 Completed

2.1

1.2

HOUNSLOW

Kempton Wildlife Reserve

Bunny Lane

3.1 Station

3.2 Halt

1.4

2.2

1.3

1.3

2.3

4.1

Sports Ground

Pav

Pav

Half Moon Covert

Recreation Ground

RICHMOND

Track

1.5

Reservoir

(RED HOUSE)

SPELTHORNE

Kempton Park Race Course

Allot Gdns

2.4

Football Ground

3.3 STATION

Hydes Field

Kempton Gate

1.6

Portlane Brook

Portlane Bridge

Track

3.2

HAMPTON TO KEMPTON RAILWAY PROJECT
PROPOSED ROUTE, STATIONS & SERVICE LINES

SEE ROUTE & TRACK BED DESCRIPTION DOCUMENT FOR INFORMATION ABOUT REFERENCE NUMBERS.

DRAWING No. KSM 10. Drn. R.P.Marie 12/06/15

85%

HAMPTON TO KEMPTON RAILWAY RESTORATION PROJECT.

ROUTE & TRACK BED DESCRIPTION (from Kempton to Hampton).
To be read in conjunction with drawing number KSM 10

Borough boundaries of Hounslow, Richmond (London) and Spelthorne (Surrey) shown edged blue. Construction will proceed from the Kempton end.
Thames Water have drafted a long-term lease of the land required for the main line (section 1.1 to 1.6) and agreement is expected before the end of 2016.

1. Description of track bed sections for main running line.

1.1. Hanworth Loop. (Built on land leased to the Kempton Great Engines Trust.).
In October 2010 the London Borough of Hounslow granted planning permission for 300 metres of track with a platform and rolling stock storage facilities in a paddock to the west of the Kempton Museum Triple House House. The track was approved by the Office of the Rail Regulator and opened to the public in June 2013.

1.2. Link from Hanworth Loop to the Thames Water field to the south of the Triple House.
It is proposed that the track will bridge the Portlane Brook adjacent to the paddock, cross the land under the A316 and bridge the Staines Aqueduct then enter the field to the south of the Triple House and Thames Water's carbon regeneration works. This is known as the **South Field.** This deviation is necessary to avoid the main waterworks.

1.3. South Field to the Kempton bridle path (Bunny Lane) crossing of the Staines Aqueduct.
It is proposed that the track will go southwards near the western edge of the field; make a level crossing of the A.W.T.W. access road before turning east parallel to the Waterloo to Shepperton railway line (South-West Trains). It will then turn North East, to cross the Staines Aqueduct then follow the original track bed alongside the embankment of the former reservoir to a crossing at Bunny Lane. Bunny Lane has been severed near the Shepperton line bridge (about 75 metres from the aqueduct crossing) because Kempton Park Racecourse removed a bridge over the Portlane Brook to stop trespassing on the racecourse.

1.4. Bunny Lane to Southwest Trains Shepperton line bridge.
It is proposed that the track will follow the original Metropolitan Water Board railway route of 1915 (closed 1946). A halt will be provided to enable visits to the Kempton wildlife reserve (see 3.2).

1.5. Southwest Trains Shepperton line bridge to Hydes Field gate.
It is proposed that the track will continue on the original M.W.B. railway route adjacent to the Hampton Distributing (Red House) reservoir.

1.6. Hampton - Hydes Field terminus.
It is proposed that the track will follow the original route along the eastern side of the T.W. service road and terminate as near to the Upper Sunbury Road as possible.
Lease note. TW are said to have offered land for an access road to the Oldfield Road industrial estate and a housing development. This could prevent the long term plan to extend the railway to the River Thames via the track bed in the Hampton Works which was given protected status by the London Borough of Richmond Unitary Development Plan in 2004.

2. Description of track bed sections required for service operations.

2.1. Branch from link (1.2) to area adjacent to the K.G.E.T. toilet block.
This is a short spur to provide servicing facilities close to the Kempton Steam Museum.

2.2. Branch in South Field to follow the former standard gauge trackbed from the Southwest Trains line to the Thames Water gauge house.
The gauge house is no longer used for water supply purposes and has the potential to provide servicing facilities for steam locomotives. A branch line could cross the Staines aqueduct on the existing bridge with tramway type track so that road vehicles can cross unimpeded. This branch will not carry members of the public and site access will be restricted to authorised M.W.B.R. members. Sidings will be needed adjacent to the gauge house.
Lease note. TW conservation has a prior claim to the use of this building.

2.3. Branch (with triangular junction) near the existing hardstanding storage area to meet with the T.W. access road in South Field.
If the lease permits, a short spur will be built to provide a means of loading and unloading permanent way materials together with a maintenance and storage area.
Lease note. TW will continue to use the hard standing area for storage purposes.

2.4. Branch (with triangular junction) in Hydes Field to the former pipe store buildings.
This will provide a service area for the far end of the line.
Lease note. At present, Thames Water wants to exclude this area from the lease.

3. Station sites.

3.1. (Provisional) Area in the north-west corner of South Field for Museum station.
This will have to be large enough to accommodate the station and associated run-around loop. The station will require access by means of a footpath leading from the footbridge which crosses the Staines Aqueduct under the A316 . It will not be used if the Hanworth Loop station is retained.

3.2. Area to the east of Bunny Lane for wildlife viewing halt.
This will have to accommodate an island platform and assembly area for visitors. A run-around loop will be needed until the line is extended to Hydes Field and could remain in use if traffic is develops enough to require two trains in operation at one time.

3.3. Area to the south of the Oldfield Road entrance gate into Hydes Field.
This is between the main route and the field boundary fence and includes the old T.W. gatehouse which will be incorporated into the proposed station. The area will have to be long enough to accommodate a run-around loop and carriage siding.

4. Description of track sections required for possible future development.
(Route shown dotted on drg. KSM10).

4.1. Extension of main line to access Southwest Trains Kempton Park Station.
It will run parallel with the Southwest Trains line in South Field towards Kempton Park station as far as the limit of Thames Water land. From there, it is intended that our track will be laid on the formation of the old coal siding belonging to Network Rail to access the station on an existing unused platform face. Informal talks have already taken place with Network Rail. Connection with the main line will require sufficient land to build a triangular junction to enable trains to serve both Kempton Park and Museum stations.

4.2. Racecourse deviation curve in Hydes Field.
Kempton Park Racecourse has expressed interest in a railway connection to their car park by way of their land known as the Long Start. The line will have to curve away from the Oldfield Road side of Hydes Field after the station, cross the Thames Water service road then access the Long Start near to the Thames Water gate.

R.P.Marie
Original 2010
Revised 12/06/15
Revised 7/08/16

From: Bryan Woodriff [mailto:[redacted]]
Sent: 26 September 2016 00:35
To: 'Robert Leadbetter'
Cc: Andrea Kitzberger-Smith
Subject: RE: Hampton and Kempton Waterworks Railway

Dear Robert,

Here is a copy of my supportive and explanatory letter to Ms. Kitzberger-Smith. I am sorry you couldn't get round this evening to see me. Please let me know whether my letter could be a useful supplement to yours. I shall await your answer.

Kindest regards,

Bryan

Dear Ms. Kitzberger-Smith,

I thought it might be helpful, having just read Robert Leadbetter's letter to you, that I might add my support for what he has said.

From 1986 – 2002, I and my late wife were the local Councillors for Hampton and Hampton North. We came to live in Hampton in 1965 because I, as a Senior Lecturer in Industrial Archaeology at the then Kingston Polytechnic, and later the Richmond Council Governor at the pre-University, used to take my Engineering students on regular visits to the Hampton and District Waterworks to see the wide range of activities used there in the collection and production of water for public use. With the assistance of a Mr. Woodcock, who lived locally and who had been responsible for the construction of at least one of the Reservoirs (The Queen Mary), I became very interested in the history of the several local Waterworks and their contribution to our area's development.
Mr. Woodcock outlined the history of the Waterworks' 2ft. narrow gauge railway from the Thames to the Triple Expansion Engine House , then in full working order, and asked me , as his local Councillor, if the Railway – lost during WW2 – might be restored as a feature of local and national industrial history and importance. Hence, when the Council was discussing its new Local Plan in the Nineties, I was able along with others, to record our local wishes to have the Waterworks Railway track-bed preserved for future restoration with the general agreement of the then Waterworks' management. I have always understood that this point was agreed and included in our then Local Plan.
This agreement led eventually to the establishment of a local Railway Preservation Society of which I was initially Chairman and later its current President. I worked with Sir William McAlpine when I was a Council Member of the Transport Trust and when he became the chairman of Kempton Great Engines Trust.
Our Heritage Railway Restoration project should still be in our (RuT's) local plan, even if its name has changed over the years. Robert Leadbetter is working hard to fulfil the first part of our (and Mr. Woodcock's) original aims to bring the railway down as far as Hampton – Hydes Field (Oldfield Road/The Lanes/Priory Road) although it will not attempt to enter the cutting and penetrate the waterworks via the small tunnel under the Upper Sunbury Road without further agreement in the future.
I will be happy to talk with you and outline further how important this project has been seen by the older local residents and at one time by many of the former Councillors who helped our

organisation. Suffice it to say that Prince Charles on an early visit to the K.G.E.T. expressed his wish to be the first passenger on our restored railway.

Yours sincerely,

Bryan Woodriff (Prof).
[redacted]

Dear Ms Kitzberger-Smith.
Thank you for your email in reply to councillor Sales.
It was a pleasant and an enjoyable evening last Tuesday 6th September 2016 at the Village Groups Forum. It was nice to meet you and others from the council.
Our Heritage Railway Restoration project certainly wishes to be included in the local plan as we will be a major feature in the community in this part of Richmond. We will impact on the movement of people and development of Hampton (as has the "Bluebell Line" in Sussex)
Our training track that we built in a paddock leased by the Kempton Great Engines Trust has turned out to be a successful business that we are extending down to the Oldfield Road area of Hampton (and perhaps beyond back down to the Thames).
I attach the official map; The overview of the proposed project and the route and track-bed description and preservation of the heritage track-bed in Hydes field is important to us.
A look at our website
www.hamptonkemptonrailway.org.uk
will give a view of what is coming to the Hampton part of Richmond upon Thames
Robert Leadbetter
Hon. Director
Hampton and Kempton Waterworks Railway
Company limited by guarantee No 8428399

[redacted]

[redacted]

Annex 2 Comments on site allocations from GLAAS

Site Name	Archaeological Risk	Likely requirements
SA 2 Platts Eyot	• Palaeoenvironmental interest • Possibly focus of prehistoric activity • May have isolated finds or wooden structures buried in the underlying deposits	Pre-planning: Archaeological Desk Based Assessment (DBA) and Geoarchaeological Assessment/Evaluation
SA 5 Telephone Exchange, Teddington	• Possible potential for early/late medieval remains	Pre-planning: DBA
SA 6 Teddington Delivery Office	• Possible potential for early/late medieval remains • Existing building is also of some interest	Pre-planning: DBA
SA 8 St Mary's University	• Potential for remains associated with the 18th century landscaped garden and house • Prehistoric worked flint found to the north • Some archaeological investigation previously carried out within the site which recorded a possible Roman ditch and 18th-century garden features	Pre-planning: DBA
SA 9 Richmond upon Thames College	• Only southern part within a current APA • Potential for Palaeo environmental remains • Previous advice for the site has recommended an evaluation condition	Post-planning: Evaluation condition
SA 12 Mereway Day Centre	• Potential for Palaeoenvironmental remains/deposits	Pre-planning: DBA and Geoarchaeological Assessment
SA 14 Ham Close	• Potential for prehistoric finds • Potential for early/late medieval settlement remains	Pre-planning: DBA and possibly an evaluation
SA 15 Cassel Hospital, Ham Common	• Potential for early/late medieval remains • Historic maps show landscaped grounds associated with the late post-medieval Morgan House	Pre-planning: DBA and possibly evaluation
SA 16 St Michael's Convent	• Only partially within an APA • Potential for early/late medieval settlement remains	Pre-planning: DBA
SA 17 Ryde House	• Potential for medieval settlement remains • Already a DBA for the site which shows that at least 4 phases of development have occurred within the site since the 19th-century which has resulted in substantial impact to archaeological survival. Current advice is for a condition for an archaeological watching brief	Post-planning: Watching Brief condition

Annex 2 Comments on site allocations from GLAAS

Site Name	Archaeological Risk	Likely requirements
SA 18 Richmond Station	• Potential for remains associated with the historic settlement development of Richmond • Existing building likely to have heavily impacted archaeological survival	Pre-planning: DBA
SA 19 Friars Lane	• Very close to the site of Richmond Palace • Evaluation in 2006 recorded dumping deposits and the remains of a 19th-century Brewery.	Pre-planning: DBA
SA 21 Pools on the Park and Surroundings	• Within the historic Richmond deer park • To the north of the historic settlement of Richmond	Pre-planning: DBA
SA 22 Richmond Rugby and Richmond Athletic Ground	• Within the historic Richmond deer park • To the north of the historic settlement of Richmond	Pre-planning: DBA
SA 23 Stag Brewery	• Potential for remains of a historic manor house • Numerous finds have been recorded from the Thames	Pre-planning: DBA and possibly evaluation
SA 24 Mortlake and Barnes Delivery Office	• Within an APA although archaeological potential is uncertain	Pre-planning: DBA
SA 25 Kew Biothane Plant	• Potential for Palaeoenvironmental remains along the Thames foreshore	Pre-planning: DBA and Geoarchaeological Assessment
Appendix 6: National Physical Lab.	• Only southern part within an APA • Recent advice on the site has been for an archaeological condition for evaluation	Post-planning: Evaluation condition
Appendix 6: Teddington Business Park	• Potential for early/late medieval settlement remains • Prehistoric and medieval finds recorded to the east along with a possible site for an historic manor house	Pre-planning: DBA and possibly evaluation
Appendix 6: West Twickenham Cluster	• Only partially within an APA • Potential for palaeoenvironmental remains	Pre-planning: DBA and Geoarchaeological Assessment
Appendix 6: Heathland Industrial Estate	• Only partially within an APA • Potential for early/late medieval settlement remains	Pre-planning: DBA
Appendix 6: St George's Industrial Estate	• Potential for early/late medieval settlement remains	Pre-planning: DBA and possibly evaluation

Annex 2 Comments on site allocations from GLAAS

Site Name	Archaeological Risk	Likely requirements
Appendix 6: Mererway Road Industrial Estate	• Potential for early/late medieval settlement remains • Potential for Palaeoenvironmental remains	Pre-planning: DBA and Geoarchaeological Assessment
Appendix 6: Swan Island Industrial Estate	• Potential for palaeoenvironmental remains	Pre-planning: DBA and Geoarchaeological Assessment
Appendix 6: Electroline House and surrounds	• Southern part within an APA • Potential for early/late medieval settlement remains	Pre-planning: DBA
Appendix 6: Twickenham Film Studios and Arlington Works	• Not within an APA but existing buildings could be of historical and cultural interest	Post-planning: Historic Building recording condition

THE OLD DEER PARK, RICHMOND

Re-connecting the Town to its local park - Realising an under-recognised parkland asset

A FRAMEWORK FOR FUTURE CONSERVATION AND ENHANCEMENT

A SUBMISSION URGING REVIEW OF BOUNDARY DEFINITIONS

FEBRUARY, 2013

THE RICHMOND SOCIETY – THE KEW SOCIETY
THE FRIENDS OF RICHMOND GREEN – THE FRIENDS OF OLD DEER PARK
THE ST. MARGARET'S ESTATE RESIDENTS ASSOCIATION

A SUBMISSION BY THE OLD DEER PARK WORKING GROUP URGING REVIEW OF BOUNDARY DEFINITIONS

1. THE WORKING GROUP AND ITS REPORT

1.1 Last summer, the Old Deer Park Working Group comprising representatives of The Richmond Society, The Kew Society, The Friends of Richmond Green, The Friends of Old Deer Park and The St. Margaret's Estate Residents Association, prepared and published a report – *"The Old Deer Park, Richmond – Re-connecting the Town to its local park – Realising an under-recognised parkland asset – A framework for future conservation and enhancement June 2012"*. The report is intended to provide a positive contribution to discussion and debate in the context of the falling-in and renewal of all but one of the existing leases granted by the Crown Estate for the land comprising the Old Deer Park, Richmond. Details about each of the local groups and their objectives are set out in Appendix 1 of the report. Copies of the report were circulated to the Crown Estate, Council members and officers, representatives of the respective lessees, and to English Heritage. A copy of the report is available on the Richmond Society's web-site: www.richmondsociety.co.uk. The Maps referred to below are included in the report.

2. THE NEED FOR REVIEW OF THE BOUNDARY DEFINITIONS

2.1. In its report, the Working Group raised concerns regarding significant anomalies regarding the definitions of a number of boundaries relating to the Old Deer Park shown in the Council's *Local Development Framework Proposals Map, Adopted November, 2011*:

'The greater part of the Park, including the Old Deer Car-park and the British Legion and buildings immediately adjacent, has long been rightly designated as *Metropolitan Open Land* (See Map 5). However, anomalously, the designation excludes the listed *Pools* on *the Park* swimming pools complex and its landscaped grounds and the carriageway and footways of The Twickenham Road, despite the inclusion of these areas and features within a grade I *Registered Park* and the buffer-zone a *World Heritage Site*, and despite repeated representations by groups in the local community. The *MOL* designation also excludes the land to the immediate south of the car-park on which the single-storey buildings occupied by voluntary groups stand. The greater part of the Park is designated as part the *Thames Special Policy Area* under the *London Plan, 2011* (Map 7.6 – Hampton to Wandsworth) and its boundaries defined in detail on the *Local Development Framework Proposals Map, Adopted November, 2011*, supporting the Council's *Core Strategy, Adopted 2009* and *Development Management Plan, Adopted November, 2011*. The Royal Mid-Surrey Golf Club course, together with limited parts of the public park at its western extremity adjacent to the river and between the Twickenham Road and the railway

cutting and viaduct are designated as *Other sites of nature importance*, and the publicly accessible part of the Park – the original 'eighty-seven acres' - is designated as *Public Open Space* (See Map 5). However, anomalously, the designation excludes the Old Deer Park Car-park. The group notes that significant parts of the public park are identified in the adopted *Proposals Map* as *Proposed areas for tree planting.*' (Paragraph 2.5)

'The Working Group notes that wholly anomalously, the entire area of the Old Deer Park Car-park is identified by the Council in the adopted *Proposals Map* as forming part of the designated *Richmond Town Centre* despite its clearly forming an integral part of the Old Deer Park, despite the inclusion of the area within the grade I *Royal Botanic Gardens, Kew Registered Park*, and despite repeated representations over past years by groups in the local community questioning its designation as part of an *Area of mixed use* (See Map 6). That part of the car-park within the freehold ownership of the Council is specifically identified in the Council's Sales/Reinvestment Programme under reference 0538.' (Paragraph 2.6)

2.2. In paragraphs 4.5 and 7.4 of the report, the Working Group urged the Council to give urgent consideration to reviewing and adjusting limited sections of the boundaries of *Metropolitan Open Land*, *Public Open Space and the Richmond Town Centre* in the area of the Old Deer Park as presently drawn in the Council's *Local Development Framework Proposals Map, Adopted November, 2011*, as repeatedly urged by groups in the local community (and English Heritage) over past years, in order to remedy the serious zoning anomalies.

2.3. The Working Group acknowledges that these boundary definition issues have been queried and explored before in the context of the consultations and inquiries relating to the drafting and adoption of various local plans over past years, but believes that the case for remedying such anomalies is now most urgent and essential given the Crown Estate's and the Council's clear recognition of the considerable landscape significance of the Old Deer Park reflected in Kim Wilkie's *Crown Estate Landscape Strategy* and the Council's *Old Deer Park Study* and the implications of the falling-in of the leases of substantial parts of the Park. In addition, the Working Group believes that remedying such anomalies would provide consistency with the boundary definitions relating to other major open spaces of historical and ecological significance across the Borough.

2.4 The Working Group values the opportunity of explaining its concerns regarding these boundary anomalies at the meeting held between its representatives and senior Council officers at the Civic Centre on the 29th January and is now taking up the suggestion of officers to make this formal submission urging that the relevant boundaries be reviewed. In so doing, the Group would emphasize its view that remedying such anomalies will strengthen the capacity of the Council as local planning authority to seek and secure the appropriate and sensitive development of the Park in future years whilst resisting development proposals that would harm or otherwise threaten the particular open space character and significance of the Park as a designated heritage asset. The Group would further emphasize that it does not see

such modified designations and the policies to which they relate as militating against the realisation of the desirable objectives for the future use and enjoyment of the Park by the borough community.

2.5 In summary, the Group urges the Council to review and amend the relevant boundaries as follows:

- To include the listed *Pools on the Park* swimming pools complex and its landscaped grounds and adjacent car-park; the land to the immediate south of the Old Deer Park car-park extending down towards the railway (on which the single-storey buildings occupied by voluntary groups stand); and the carriageway and footways of the Twickenham Road, as Metropolitan Open Land.

- To include the listed *Pools on the Park* swimming pools complex and its landscaped grounds and adjacent car-park; the entirety of the Old Deer Park Car-park; the land to the immediate south of the Old Deer Park Car-park extending down towards the railway (on which the single-storey buildings occupied by voluntary groups stand); as Public Open Space.

- To remove the Old Deer Park Car-park; the land to the immediate south of the Old Deer Park Car-park extending down towards the railway (on which the single-storey buildings occupied by voluntary groups stand); and the Post Office Depot and TA Centre from designation as part of the Town Centre.

2.6 The Group would be very willing to clarify and discuss this submission in further detail.

The Old Deer Park Working Group
10 February 2013

LONDON BOROUGH OF RICHMOND-UPON-THAMES LOCAL DEVELOPMENT FRAMEWORK

A RESPONSE BY THE OLD DEER PARK WORKING GROUP TO CONSULTATION ON THE PRE-PUBLICATION VERSION OF THE SITE ALLOCATIONS PLAN, OCTOBER, 2013

1. INTRODUCTION

1.1 This submission is made by the Old Deer Park Working Group.

1.2 The Group comprises representatives of The Richmond Society, The Kew Society, The Friends of Richmond Green, The Friends of Old Deer Park and The St Margaret's Estate Residents Association. In June, 2012 the Group published the report: *The Old Deer Park, Richmond - Re-connecting the Town to its local park - Realising an under-recognised parkland asset – A framework for conservation and enhancement.*

1.3 The Group's aim in publishing the report was to provide a positive contribution to discussion and debate in the context of the falling-in and renewal of all but two of the existing leases granted by The Crown Estate for the land comprising the Old Deer Park, Richmond. Details about each of the local groups who made up the Working Group and their objectives were set out in Appendix 1 of the report. Copies of the report were circulated to The Crown Estate, Council members and officers, representatives of the respective lessees, and to English Heritage, and made available to the broader community. Since publication, the findings and recommendations of the report have been discussed at meetings with The Crown Estate and Council members and officers. A copy of the report is available on the Richmond Society's web-site.

1.4 This submission follows the formal submission to the Council made by the Working Group in February, 2013 of *The Old Deer Park, Richmond - Re-connecting the Town to its local park - Realising an under-recognised parkland asset – A framework for conservation and enhancement - A submission urging review of boundary definitions, February, 2013*, and draws upon that submission.

2. THE CONCERNS OF THE OLD DEER PARK WORKING GROUP

2.1 The concerns of the Old Deer Park Working Group are set out in three parts:

- Part I addresses issues relating to the proposal and justification for Proposal RI 1 - Pools on the Park and surroundings, Old Deer Park, Richmond as set out in the draft Site Allocations Plan;

- Part 2 addresses issues relating to the proposal and justification for Proposal RI 4 – Richmond Rugby, Kew Foot Road, Richmond as set out in the draft Site Allocations Plan; and

- Part 3 addresses issues relating to the Old Deer Park Car-park, in close proximity and related to the Pools-on-the-Park and Richmond Athletic Ground sites, and the Twickenham Road (A316).

2.2 The substantive part of the concerns of the Working Group about each of the three sites relates directly but not exclusively to the significant anomalies in the definitions of boundaries relating to the Old Deer Park shown in the Council's *Local Development Framework Proposals Map, Adopted November, 2011*, as already highlighted in the Group's submission of February 2013.

PART 1 – PROPOSAL RI 1 – POOLS ON THE PARK AND SURROUNDINGS, OLD DEER PARK, RICHMOND

P1.1 Despite the location of the Pools-on-the-Park Site at the very heart of the Old Deer Park, the extensive open, landscaped character of the site, the public ownership of the site (through the Council as a lessee of The Crown Estate), public accessibility to the site, and its location within the formally designated Old Deer Park Conservation Area and the buffer zone of the formally inscribed Royal Botanic Gardens, Kew, World Heritage Site, and its forming part of the area included on English Heritage's *Register of Parks and Gardens of Special Historic Interest* under the grade I entry for the Royal Botanic Gardens, Kew and the Old Deer Park; wholly anomalously and irrationally the site is presently excluded from designation as Metropolitan Open Land and as Public Open Space in the Council's *Local Development Framework Proposals Map, Adopted November, 2011*.

P1.2 Importantly, too, the triangular area of the Park immediately to the north-western boundary of the Pools-on-the-Park Site, bounded on its north-eastern side by the access-road leading to the Royal Mid-Surrey Golf Club and The King's Observatory, and on its north-western side by the public tennis-courts, occupied in part by the public sports changing-rooms and club-room building and the largely redundant and derelict Council maintenance-depot for the Park – both designed and built as integral parts of the original swimming-pool complex - is similarly, anomalously and irrationally excluded from designation as Public Open Space, despite the essential functional association with the public part of the Park immediately adjacent.

P1.3 The Working Group drew attention to these serious deficiencies of designation in its formal submission of February, 2013, arguing that the need to remedy such anomalies was urgent and essential. The Group urged the Council to include the Pools-on-the-

Park swimming pools complex and its landscaped grounds and adjacent car-park within Metropolitan Open Land and Public Open Space designations.

P1.4 The Group was much disappointed by the Council's rejection of such a sound and reasonable request as confirmed in Appendix Three – Results of 'Call for Sites' as first attached to the *Report of the Strategic Cabinet Member for Environment, Planning, Parks and Highways* as considered by the Council's Cabinet on the 19th September, 2013, and in the documentation attached to the current consultation material.

P1.5 The Group considers the Council's stated reason for rejecting its request for remedying each of the anomalous designations on the grounds 'that this would not be appropriate as area is not open' as patently absurd and notes that the this rejection by the Council has been put forward without any proper justification, let alone one based on sound evidence.

P1.6 The Group notes that in the Council's Site Assessment for the Site (as attached to the current consultation material) it is suggested 'the designations on this site were considered at the UDP Inquiry and agreed by the Inspector to be appropriate'. However, the relevant part of the Inspector's Report is neither identified nor quoted. It is further suggested that 'the Council does not consider that there have been any changes in circumstances since then which would make the designations inappropriate and therefore does not propose to make any alterations'. Anomalously, such a claim is inconsistent with the significant changes in the policy context since 2004 brought about by publication of *The London Plan, 2011* and the *National Planning Policy Framework* in March, 2012, and the implementation of the Council's own LDF programme; and, importantly, the imminent falling-in of the leases of the relevant land.

P1.7 Importantly, too, the Council's position is wholly inconsistent with the designation of other, similar, open land within the Borough as shown in the *Local Development Framework Proposals Map, Adopted November 2011*.

P1.8 Once again, the Working Group urges the Council to remedy the serious designation anomalies that presently exist.

P1.9 The Working Group also urges the Council to amend the wording of the 'Justification' to establish consistency with current statutory provisions and relevant policy as set out in the *National Planning Policy Framework* and would suggest the following adjustment to the wording of the third and fourth sentences:

'Any proposed improvements or additional development must ensure the preservation of the special interest of the listed complex and its setting and sustain their significance; preserve or enhance the character or appearance of the conservation area and registered park in which the complex and its landscaped setting are located and sustain their significance; and respect the parkland character of the Metropolitan Open Land, avoiding encroachment into the area beyond the boundary of the Site and the

present public sports changing-rooms and club-room building and the largely redundant and derelict Council maintenance-depot for the Park'.

P1.10 The Working Group also urges the Council to add the following to the wording of the Justification: 'Any proposed improvements or additional development should have full regard to the relevant policies set out in The Crown Estate's *The Old Deer Park Richmond - Landscape Strategy, 1999*.

PART 2 – PROPOSAL RI 4 – RICHMOND RUGBY, KEW FOOT ROAD, RICHMOND

P2.1 The Working Group urges the Council to correct the title and address of the site to 'The Richmond Athletic Association Ground, Old Deer Park' in order to properly reflect the long established ownership and diverse outdoor sports use of the site and its comprising an integral part of the Old Deer Park, and to amend the Justification statement in order to properly cover the potential and significant issues arising from the upgrading of the outdoor recreational facilities presently provided on the site.

P2.2 The Group considers that the reference to 'enabling development' in the Justification should be struck out.

P2.3 The Group considers the present wording of the Justification as wholly deficient and suggests the addition of wording along the following lines:

'The Athletic Association Ground contains a listed, late-Victorian sports pavilion/grandstand and is located within the formally designated Old Deer Park Conservation Area and the buffer zone of the formally inscribed Royal Botanic Gardens, Kew, World Heritage Site, and forms part of the land included on English Heritage's *Register of Parks and Gardens of Special Historic Interest* under the grade I entry for the Royal Botanic Gardens, Kew and the Old Deer Park.

Any proposed improvements or additional development must ensure the preservation of the special interest of the listed pavilion/grandstand and its setting and sustain their significance; preserve or enhance the character or appearance of the conservation area and registered park in which the complex and its landscaped setting are located and sustain their significance; and respect the parkland character of the Metropolitan Open Land, avoiding encroachment into the area beyond the boundary of the Site. Only car-parking directly relating to the primary use of the site for recreation purposes shall be permitted and should be extensively landscaped to reflect the significant location of the site within the Park. The potentially adverse effects of any floodlighting of pitches shall be mitigated in order to protect the significance of the site as an integral part of the Old Deer Park and the amenity of nearby local residents'.

P2.4 The Working Group also urges the Council to add the following to the wording of the Justification: 'Any proposed improvements or additional development should have full regard to the relevant policies set out in The Crown Estate's *The Old Deer Park Richmond - Landscape Strategy, 1999.*

PART 3 – THE OLD DEER PARK CAR-PARK AND THE TWICKENHAM ROAD

P3.1 Whilst not included as a specific site within the *Site Allocations Plan*, the Old Deer Park Car-park, like the Pools-on-the-Park and the Richmond Athletic Association Ground Sites close by, forms an integral part of the Old Deer Park and is wholly located within the formally designated Old Deer Park Conservation Area and forms part of the area included on English Heritage's *Register of Parks and Gardens of Special Historic Interest* under the grade I entry for the Royal Botanic Gardens, Kew and the Old Deer Park. Given the desirability of a coherent approach to the future conservation and enhancement of the Old Deer Park, the Working Group believes that the Council should take the opportunity of remedying the present designation anomalies relating to the Old Deer Park Car-park implicit within the *Local Development Framework – Proposals Map – Adopted, 2011* in finalising and adopting the *Site Allocations Plan* and adjusting the *Proposals Map.*

P3.2 The Old Deer Car-park is located in that part of the Old Deer Park closest to The Green and at the principal entry-points to the Park for pedestrians from The Green and Park Lane. It presents an open and partly landscaped character and appearance, enjoys unrestricted public access and is in public ownership (through the Council as a lessee of The Crown Estate). It is located entirely within the formally designated Old Deer Park Conservation Area and forms part of the area included on English Heritage's *Register of Parks and Gardens of Special Historic Interest* under the grade I entry for the Royal Botanic Gardens, Kew and the Old Deer Park. Despite these major factors, wholly anomalously and irrationally, the entire car-park site is presently excluded from designation as Public Open Space, and the land to the immediate south of the car-park on which the single-storey buildings occupied by the voluntary groups stand, excluded from designation as Public Open Space and Metropolitan Open Land. The latter anomaly is particularly perverse given that the land adjacent to the TA Centre and Richmond Royal Mail Delivery Office only a few yards away on which the single-storey buildings occupied by the British Legion and other voluntary groups stand, is formally designated as Metropolitan Open Land. Importantly, none of the car-parks in the Borough's other major historic parks – Richmond and Bushy Parks are similarly excluded from designation as Public Open Space.

P3.3 Similarly, despite the location of the Old Deer Park and the Car-park on the far side of the South-West Trains railway-lines and cutting, quite separate from the heart of the Town beyond The Green; despite the open and partly landscaped character and

appearance of the Car-park site; its location within the formally designated Old Deer Park Conservation Area and its inclusion on English Heritage's *Register of Parks and Gardens of Special Historic Interest* under the grade I entry for the Royal Botanic Gardens, Kew and the Old Deer Park, wholly anomalously and irrationally, the entire car-park site is designated as forming part of the Richmond Town Centre.

P3.4 The Working Group drew attention to these serious deficiencies of designation in its formal submission of February, 2013, arguing that the need to remedy such anomalies was urgent and essential. The Group urged the Council to include the entirety of the Old Deer Park Car-park within Public Open Space designation, and the land to the immediate south of the car-park on which the single-storey buildings occupied by the voluntary groups stand, within Metropolitan Open Land and Public Open Space designations; and to remove the Old Deer Park Car-park, the land to the immediate south of the Old Deer Park Car-park extending down towards the railway (on which the single-storey buildings occupied by voluntary groups stand), and the Royal Mail Delivery Office and TA Centre from designation as part of the Town Centre.

P3.5 The Group was much disappointed by the Council's rejection of the Group's sound and reasonable request to exclude the Old Deer Park and adjacent land and properties from designation as part of the Town Centre as confirmed in Appendix Three – Results of 'Call for Sites' as attached to the *Report of the Strategic Cabinet Member for Environment, Planning, Parks and Highways* as considered by the Council's Cabinet on the 19th September, 2013. Curiously, the Council was silent on the Group's requests relating to the need to address other designation issues affecting the Old Deer Park Car-park and adjacent land and properties.

P3.6 The Group considers the Council's stated reason for rejecting its request to remove the Old Deer Park and adjacent land and properties from designation as part of the Town Centre on the grounds 'that this is an appropriate designation which was supported by the Inspector at the fairly (sic) DMDPD Inquiry' as wholly questionable. The relevant part of the examiner's report is neither identified nor quoted. Indeed, the Group can find no reference to the issue in the Planning Inspectorate's *Report to the London Borough of Richmond upon Thames on the examination into the Development Management Plan* of the 12th September, 2011. The Council further suggested that 'since then there has (sic) been no significant changes, so the Council maintains its previous position on this matter'. Anomalously, such a claim is inconsistent with the significant changes in the policy context since 2004 brought about by publication of *The London Plan, 2011* and the *National Planning Policy Framework* in March, 2012, and the implementation of the Council's own LDF programme; and, importantly, the imminent falling-in of the leases of the relevant land.

P3.7 Like the Pools-on-the-Park Site, the land presently occupied by the Twickenham Road (the A.316) and the essential connections between the north-west and south-east parts of the Park that extend below the road, are excluded from designation as

Metropolitan Open Land, despite their significant location within the Park, the extensive open, landscaped character of the land to each side of the road, and their location within the formally designated Old Deer Park Conservation Area and their forming part of the area on English Heritage's *Register of Parks and Gardens of Special Historic Interest* under the grade I entry for the Royal Botanic Gardens, Kew and the Old Deer Park. However, despite these major factors, wholly anomalously and irrationally, the entire road and essential connections between the north-west and south-east parts of the Park that extend below the road the road and the connections that pass beneath it are presently excluded from designation Curiously, the Council was silent on the Group's request relating to the need to address the designation issues affecting the Twickenham Road as set out in its submission of February, 2013. Importantly, none of the roads that cross the Borough's other major historic parks – Richmond and Bushy Parks are similarly excluded from designation as Metropolitan Open Land.

P3.8 Once again, the Working Group urges the Council to remedy the serious designation anomaly that presently exist.

3. CONCLUSION

3.1 The Group remains concerned that any failure by the Council to remedy the various designation anomalies identified in Parts 1, 2 and 3 above will continue to leave the relevant areas of the Old Deer Park at significant risk of proposals for substantial built development that will damage the integrity and distinctive character of the Park. As demonstrated by a number of key cases over the last twenty-five years, the Council has shown itself particularly susceptible to accepting the principle of large-scale built development on its own leasehold land within the Park that would have had a damaging impact on the special interest, character, appearance and significance of the Park and the various buildings and structures it contains. In such a context, the Group urges the Council to declare an unambiguous commitment to follow the policies set out in The Crown Estate's *The Old Deer Park Richmond - Landscape Strategy, 1999*, and to remedy the designation anomalies as a matter of urgency.

3.2 As stated in our submission of February, 2013, the Working Group is entirely willing to clarify and discuss this submission in further detail.

The Old Deer Park Working Group 11th November, 2013.

LONDON BOROUGH OF RICHMOND-UPON-THAMES LOCAL DEVELOPMENT FRAMEWORK

A RESPONSE BY THE OLD DEER PARK WORKING GROUP TO CONSULTATION ON THE PRE-PUBLICATION VERSION OF *THE RICHMOND-UPON-THAMES LOCAL PLAN, SITE ALLOCATIONS PLAN – NEW ADDITIONAL SITES*, PUBLISHED IN JUNE, 2014

1. INTRODUCTION

1.1 This submission is made by the Old Deer Park Working Group.

1.2 The Group comprises representatives of The Richmond Society, The Kew Society, The Friends of Richmond Green, The Friends of Old Deer Park and The St Margaret's Estate Residents Association. In June, 2012 the Group published the report: *The Old Deer Park, Richmond - Re-connecting the Town to its local park - Realising an under-recognised parkland asset – A framework for conservation and enhancement.*

1.3 The Group's aim in publishing the report was to provide a positive contribution to discussion and debate in the context of the falling-in and renewal of all but two of the existing leases granted by The Crown Estate for the land comprising the Old Deer Park, Richmond. Details about each of the local groups who made up the Working Group and their objectives were set out in Appendix 1 of the report. Copies of the report were circulated to The Crown Estate, Council members and officers, representatives of the respective lessees, and to English Heritage, and made available to the broader community. Since publication, the findings and recommendations of the report have been discussed at meetings with The Crown Estate and Council members and officers. A copy of the report is available on the Richmond Society's web-site.

1.4 This submission follows the formal submission to the Council made by the Working Group in February, 2013 of *The Old Deer Park, Richmond - Re-connecting the Town to its local park - Realising an under-recognised parkland asset – A framework for conservation and enhancement - A submission urging review of boundary definitions, February, 2013*, and its submission to the Council of November, 2013 responding to consultation on the pre-publication version of *The Richmond-upon-Thames Local Plan, Site Allocations Plan* published in October, 2013.

2. THE CONCERNS OF THE OLD DEER PARK WORKING GROUP

2.1 In its submission of November, 2013, the Old Deer Park Working Group not only set out its concerns in relation to Proposal RI 1 - Pools on the Park and surroundings, Old Deer Park, Richmond and Proposal RI 4 – Richmond Rugby, Kew Foot Road,

Richmond, but also and importantly, urged that the opportunity should be taken to adjust the definition of the relevant zoning boundaries relating to the Old Deer Park Car-park site shown in the Council's *Local Development Framework Proposals Map, Adopted November, 2011*, as already highlighted in the Group's submission of February 2013, under the provisions of the *Site Allocations Plan*.

2.2 In this connection, the Group notes that a very significant adjustment in the definition of Metropolitan Open Land of the *Harrodian School* site in Lonsdale Road, Barnes – another site not included in the pre-publication version of the *Site Allocations Plan* of October, 2013 - is being advanced under the present consultation document.

2.3 In its submission of November, 2013, the Group set out sound and cogent reasons for such adjustments in the existing and highly anomalous definition of the zoning boundaries relating to the Old Deer Park Car-park site under the provisions of the *Site Allocation Plan*. The Group is accordingly dismayed and disappointed that the Council has failed to address the necessary adjustments within the present consultation document; not least, because of the clear recognition of the case for adjustments in the definition of the relevant zoning boundaries expressed by the Leader of the Council, Cabinet Members, other Councillors and planning officers at useful and constructive meetings held at York House on the 22nd January and 24th February, 2014. Accordingly, the Working Group once again urges the Council to effect the necessary adjustments in the definition of the relevant zoning boundaries under the provisions of the *Site Allocations Plan*, and to give consideration to the inclusion of the site within the *Site Allocations Plan* as a means of securing its effective conservation and sustainable future.

3. THE OLD DEER PARK CAR-PARK AND THE TWICKEHMAM ROAD

3.1 The Old Deer Park Car-park, like the Pools-on-the-Park and the Richmond Athletic Association Ground Sites close by, forms an integral part of the Old Deer Park and is wholly located within the formally designated Old Deer Park Conservation Area and forms part of the area included on English Heritage's *Register of Parks and Gardens of Special Historic Interest* under the grade I entry for the Royal Botanic Gardens, Kew and the Old Deer Park. Given the desirability of a coherent approach to the future conservation and enhancement of the Old Deer Park, the Working Group believes that the Council should take the opportunity of remedying the present designation anomalies relating to the Old Deer Park Car-park implicit within the *Local Development Framework – Proposals Map – Adopted, 2011* in finalising and adopting the *Site Allocations Plan* and adjusting the *Proposals Map.*

3.2 The Council-owned Old Deer Car-park is located in that part of the Old Deer Park closest to The Green and at the principal entry-points to the Park for pedestrians

from The Green and Park Lane. It presents an open and partly landscaped character and appearance, enjoys unrestricted public access and is in public ownership (through the Council as a lessee of The Crown Estate). It is located entirely within the formally designated Old Deer Park Conservation Area and forms part of the area included on English Heritage's *Register of Parks and Gardens of Special Historic Interest* under the grade I entry for the Royal Botanic Gardens, Kew and the Old Deer Park. Despite these major factors, wholly anomalously and irrationally, the entire car-park site is presently excluded from designation as Public Open Space, and the Council-owned land to the immediate south of the car-park on which the single-storey buildings occupied by the voluntary groups stand, excluded from designation as Public Open Space and Metropolitan Open Land. The latter anomaly is particularly perverse given that the land adjacent to the TA Centre and Richmond Royal Mail Delivery Office only a few yards away, on which the single-storey buildings occupied by the British Legion and other voluntary groups stand, is formally designated as Metropolitan Open Land. Importantly, none of the car-parks in the Borough's other major historic parks – Richmond and Bushy Parks are similarly excluded from designation as Public Open Space.

3.3 Similarly, despite the location of the Old Deer Park and the Car-park on the far side of the South-West Trains railway-lines and cutting, quite separate from the heart of the Town beyond The Green; despite the open and partly landscaped character and appearance of the Car-park site; its location within the formally designated Old Deer Park Conservation Area and its inclusion on English Heritage's *Register of Parks and Gardens of Special Historic Interest* under the grade I entry for the Royal Botanic Gardens, Kew and the Old Deer Park, wholly anomalously and irrationally, the entire car-park site is designated as forming part of the Richmond Town Centre.

3.4 The Working Group drew attention to these serious deficiencies of designation in its formal submission of February, 2013, arguing that the need to remedy such anomalies was urgent and essential. The Group urged the Council to include the entirety of the Old Deer Park Car-park within Public Open Space designation, and the land to the immediate south of the car-park on which the single-storey buildings occupied by the voluntary groups stand, within Metropolitan Open Land and Public Open Space designations; and to remove the Old Deer Park Car-park, the land to the immediate south of the Old Deer Park Car-park extending down towards the railway (on which the single-storey buildings occupied by voluntary groups stand), and the Royal Mail Delivery Office and TA Centre from designation as part of the Town Centre.

3.5 The Group was much disappointed by the Council's rejection of the Group's sound and reasonable request to exclude the Old Deer Park Car-park and adjacent land and properties from designation as part of the Town Centre as confirmed in Appendix Three – Results of 'Call for Sites' as attached to the *Report of the Strategic Cabinet Member for Environment, Planning, Parks and Highways* as considered by the Council's

Cabinet on the 19th September, 2013. Curiously, the Council was silent on the Group's requests relating to the need to address other designation issues affecting the Old Deer Park Car-park and adjacent land and properties.

3.6 The Group considers the Council's stated reason for rejecting its request to remove the Old Deer Park Car-park and adjacent land and properties from designation as part of the Town Centre on the grounds 'that this is an appropriate designation which was supported by the Inspector at the fairly (sic) DMDPD Inquiry' as wholly questionable. The relevant part of the examiner's report is neither identified nor quoted. Indeed, the Group can find no reference to the issue in the Planning Inspectorate's *Report to the London Borough of Richmond upon Thames on the examination into the Development Management Plan* of the 12th September, 2011. The Council further suggested that 'since then there has (sic) been no significant changes, so the Council maintains its previous position on this matter'. Anomalously, such a claim is inconsistent with the significant changes in the policy context since 2004 brought about by publication of *The London Plan, 2011* and the *National Planning Policy Framework* in March, 2012, and the implementation of the Council's own LDF programme; and, importantly, the imminent falling-in of the leases of the relevant land.

3.7 Like the Pools-on-the-Park Site, the land presently occupied by the Twickenham Road (the A.316) and the essential connections between the north-west and south-east parts of the Park that extend below the road, are excluded from designation as Metropolitan Open Land, despite their significant location within the Park, the extensive open, landscaped character of the land to each side of the road, and their location within the formally designated Old Deer Park Conservation Area and their forming part of the area on English Heritage's *Register of Parks and Gardens of Special Historic Interest* under the grade I entry for the Royal Botanic Gardens, Kew and the Old Deer Park. However, despite these major factors, wholly anomalously and irrationally, the entire road and essential connections between the north-west and south-east parts of the Park that extend below the road the road and the connections that pass beneath it are presently excluded from designation Curiously, the Council was silent on the Group's request relating to the need to address the designation issues affecting the Twickenham Road as set out in its submission of February, 2013. Importantly, none of the roads that cross the Borough's other major historic parks – Richmond and Bushy Parks are similarly excluded from designation as Metropolitan Open Land.

3.8 Once again, the Working Group urges the Council to remedy the serious designation anomalies that presently exist.

4. CONCLUSION

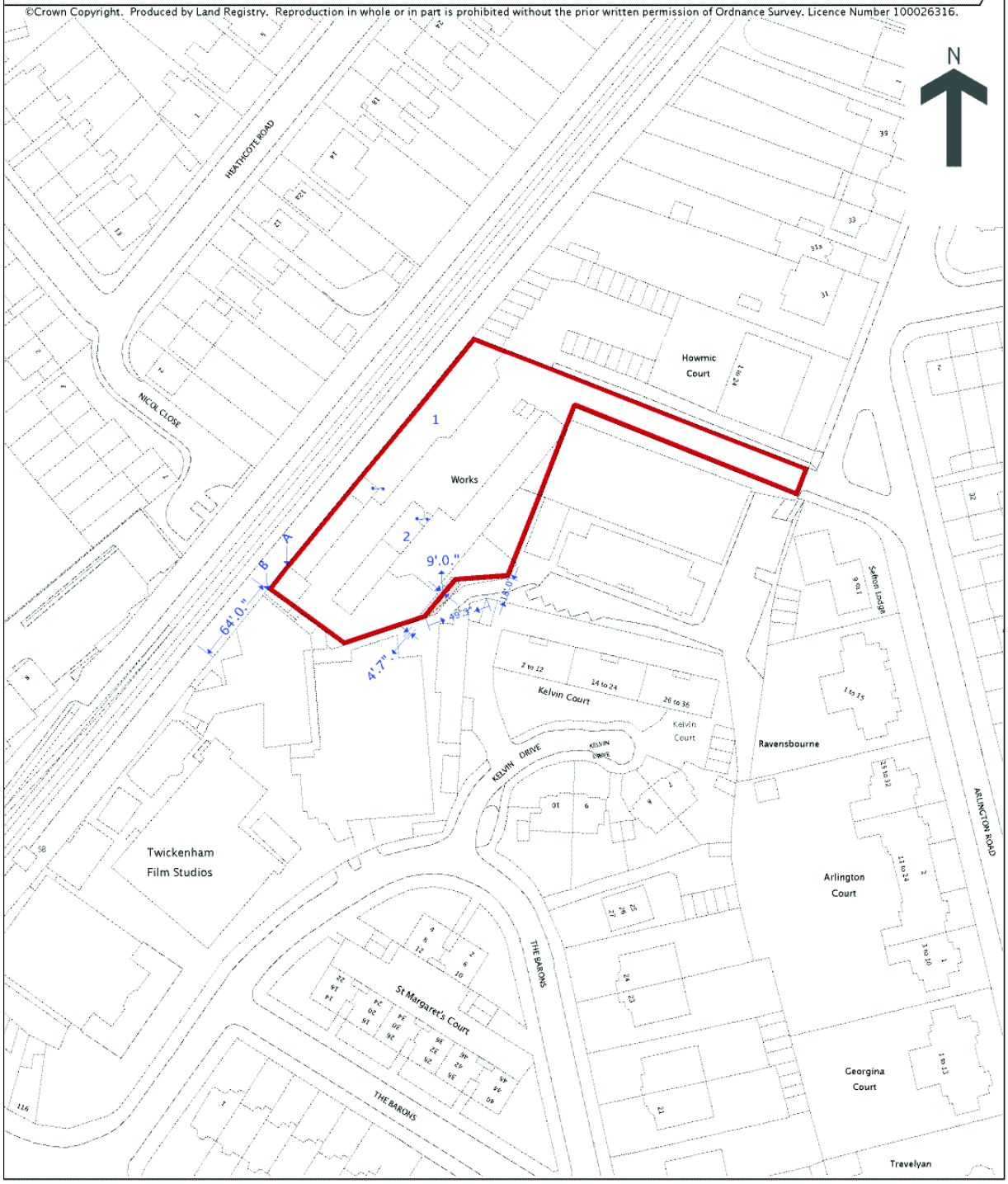
4.1 The Group remains concerned that any failure by the Council to remedy the various designation anomalies relating to the Old Deer Park Car-park site, and the Pools-on-the Park and Richmond Athletic Association Ground sites too, will continue to leave the relevant areas of the Old Deer Park at significant risk of proposals for substantial built development that will damage the integrity and distinctive character of the Park. As demonstrated by a number of key cases over the last twenty-five years, the Council has shown itself particularly susceptible to accepting the principle of large-scale built development on its own leasehold land within the Park that would have had a damaging impact on the special interest, character, appearance and significance of the Park and the various buildings and structures it contains. In such a context, the Group urges the Council to declare an unambiguous commitment to follow the policies set out in The Crown Estate's *The Old Deer Park Richmond - Landscape Strategy, 1999*, and to remedy the designation anomalies as a matter of urgency.

4.2 As stated in our earlier submissions of February and November, 2013, the Working Group is entirely willing to clarify and discuss this submission in further detail.

The Old Deer Park Working Group 19th July, 2014.

Land Registry
Current title plan

Title number **SGL280384**
Ordnance Survey map reference **TQ1674SE**
Scale **1:1251**
Administrative area **RICHMOND UPON THAMES**



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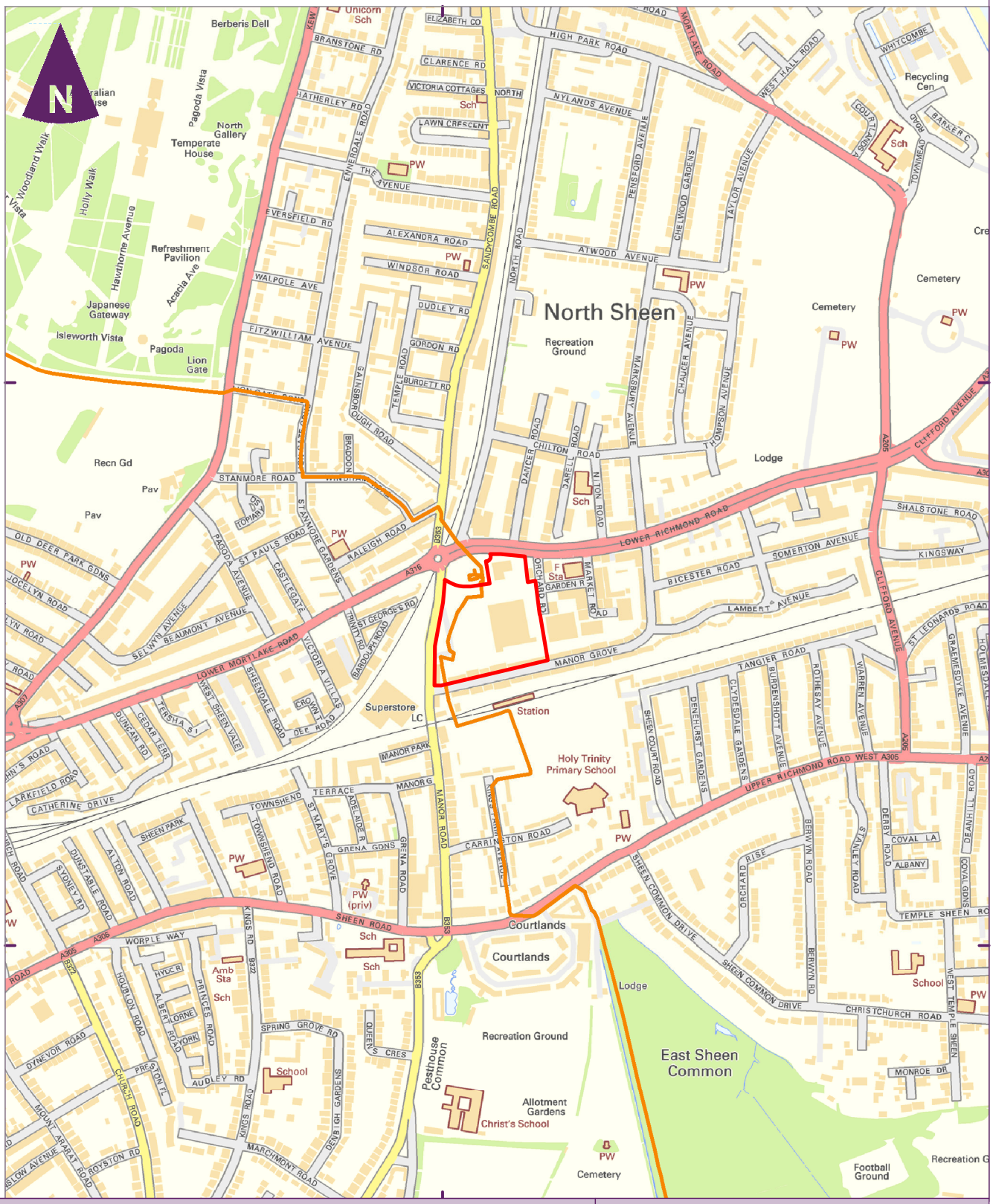

Key

Indicative site boundary

Gas distribution pipeline (high pressure)

0 100 200 300 400 500 m

Scale at A4: 1:10,000

Development Plan Monitoring

amec foster wheeler

National Grid reference:
Site GD82
Richmond
Residential

July 2016 36791-Lea214_Site GD82.mxd smitv

file: H:\Projects\36791 – National Grid Development Plan Monitoring\5 Design\Drawings\GIS\Figures\36791-Lea214_Site GD82.mxd

Allen Pyke Associates

Rugby Football Union, Twickenham Stadium

Metropolitan Open Land:

Landscape Character & Visual Appraisal

Prepared by:
Allen Pyke Associates Ltd
Landscape Consultants

Ref: 2690-RE-02-DA

Date: 19th August 2016

Landscape architecture | Urban design | Environmental planning

RUGBY FOOTBALL UNION, TWICKENHAM STADIUM

METROPOLITAN OPEN LAND:
REPRESENTATIONS TO THE LBRuT LOCAL PLAN REVIEW

LANDSCAPE CHARACTER & VISUAL APPRAISAL

This appraisal of the landscape and visual implications of the Metropolitan Open Land (MOL) on the Rugby Football Union's (RFU) land at the Twickenham Stadium has been prepared by landscape consultants Allen Pyke Associates, who are a registered practice of the Landscape Institute and member of the Institute of Environmental Management & Assessment.

Introduction

The Metropolitan Open Land (MOL) within the RFU grounds extends in a narrow band along the entire western boundary of the stadium land and varies between 30 and 50 metres in width. The MOL runs from Whitton Road, to the south, and the Whitton Dene road, to the north. The designated area shares a common boundary with the Duke of Northumberland River (DNR), which is delineated along its southern section by an evergreen clipped hedge covering a chain-link fence up to 1.8 metres in height and, to the north, by a recently erected 2.1 metre high open, green coloured, rigid metal mesh fence.

The boundary fencing forms an integral part of the crowd control and security measures required of a venue holding events of national and international importance.

The area subject to the MOL designation within the stadium grounds serves no specific leisure or recreational public open space purpose other than being the location for ancillary facilities used fully on event days in the RFU calendar, particularly the provision of coach and car parking. At other times throughout the year there is less intensive use of these areas for parking and temporary storage of equipment.

Character, Appearance & Visibility

There are no physical features or markers within the RFU land to denote the eastern boundary of the MOL or identify the designated area. The alignment indicated on the LBRuT Adopted Proposal Map arbitrarily crosses large open areas containing car and coach parks, enclosed storage compounds and other electricity supply buildings that are all urban in character. A section of the boundary line also runs over the secure inner parts of the stadium.

There is little natural 'green' space associated with any of these facilities, with almost all of land being covered by hardstand areas. In the northern coach park area a line of semi-mature trees runs parallel to the DNR boundary and on the Whitton Road boundary the overspill car parking area is covered with an artificial turf laid over a permeable hard base. However, the preponderance of these hard surfaces and their urban appearance means the MOL land on the RFU site does not complement or form part of the semi-rural MOL character of the DNR corridor and cannot be regarded as a 'green lung' as implied by officers in the scoping consultation response.

The stadium is the dominant visual feature on site and the immediate area, with its prominence being emphasised by the flat open areas within the remaining parts the grounds. The adjoining urban areas consist of a diverse range of land uses that includes a tight mix of estate housing, to the south and west, built over various periods since the 1940s, and more recent large-scale commercial and retail buildings to the east of Rugby Road. To the north of Whitton Dene is the extensive Mogden sewage treatment works, which is screened from the road and RFU land by a substantial block of tall woodland vegetation around the works boundary.

The strip of MOL on the RFU site is separated both visually and physically from the remaining parts of the designation to the west by the DNR, which includes the adjacent Chase Bridge Primary School land on Whitton Road, and the Cardinal Vaughan Fields recreation ground that is also used as an overspill parking area on match days. Further west are the sports fields and grounds of the Royal Military School of Musical at Kneller Hall on Whitton Road. With the exception of the DNR, all the areas included in the designation are in private ownership and have restricted public access.

The Whitton Dene and Rugby Road boundaries of the RFU land are contiguous with the boundary of the adjacent London Borough of Hounslow administrative area. There is no corresponding continuation of the LBRuT MOL designation in neighbouring parts of Hounslow. The DNR corridor running northwards through the Mogden sewage works, along with the substantial areas of boundary woodland surrounding the facility, are collectively designated as 'Local Green Space'. Hounslow have also designated the incidental open space opposite the north car park (between the DNR and Harlequin Close) as 'Local Green Space' rather than MOL.

Duke of Northumberland River & MOL Setting

The DNR is a man-made watercourse originally constructed in the 16th century to supply water from the River Crane to mills and Syon House in Isleworth. The river channel is now generally contained by vertical concrete or timber revetments with water levels controlled by weirs along its route. Where the DNR passes the RFU land, it is enclosed within a narrow corridor with the rising western bank being covered with dense unmanaged vegetation that screens the watercourse from the Chase Bridge School and MOL to the west. The eastern side of the river has been constructed to allow a footpath to run its length and is at a similar grade to the adjacent RFU land. The footpath is unmanaged and overgrown making pedestrian movement difficult in places.

From the section of DNR footpath north of the bridge from the stadium area over to the Cardinal Vaughan Fields, there are views through the RFU boundary mesh fencing across the northern car park. These views contain a range of urban elements associated with the stadium and more distant residential properties on Rugby Road and tower blocks in residential parts of north Twickenham beyond.

In the immediate foreground to views from the river footpath are an extensive gravel car park hardstand, enclosed compounds, storage containers, maintenance buildings and temporary structures used for staff at events. A large single-storey electrical services building and associated pipework, within the MOL, also run along part of the common boundary obscuring views of the RFU land from the adjacent section of the footpath.

To the south of the Cardinal Vaughan Fields bridge, the clipped hedge running south along the remainder of the RFU boundary to Whitton Road marks the edge of the riverside footpath. The hedge consists mainly of dense ivy covering the chain-link fence but also includes other clipped hedgerow species such as hawthorn. The hedge is maintained to a height of approximately 1.8 metres by RFU staff. This is sufficient to screen views to and from the DNR corridor throughout the year and contribute to the green appearance of this section of the RFU boundary along with the taller vegetation on the Chase Bridge School side of the river.

Local volunteer groups, supported by the Mayor of London, LBRuT and LB of Hounslow, have funding to improve access and biodiversity along the DNR corridor. Recent examples being the completed short section of the river between Whitton Road and the A316, and the resurfaced footpath beside the Harlequins rugby ground south of the A316.

Landscape Policy Guidance

MOL is a planning designation unique to the London boroughs and has the same function and purpose as Green Belt in preventing urban sprawl and coalescence. Open land and openness in the context of MOL means the protection of the designated area from development (buildings, structures or engineering earthworks) occupying land previously absent of built form. Policy 7.17 (D) of the London Plan (March 2016) sets out criteria for the establishment of MOL. The MOL within the RFU land does not meet any of the four listed criteria:

a) it does not contribute to the physical structure of London by being clearly distinguishable from the built up area;

b) the parking and storage areas within the MOL are not open air leisure, recreational, sport or arts facility in their own right, they are elements that support the activities of the stadium and its visitors;

c) the parking and storage areas within the MOL contain no features or landscapes of national or metropolitan importance;

d) the MOL on the RFU grounds is, by necessity, physically separated from the DNR corridor and the Green Chain in which it lies by tall security fencing along the common boundary and is reinforced with hedgerow vegetation along a significant part of its length.

Over the past decade, LBRuT have produced a number of open space studies and supplementary planning guidance for public space design and design quality with borough-wide assessments, which identified Twickenham and Whitton as a distinct sub-area. While references are made in these reports to the character of the urban framework and the quality of the boroughs parks and formal open spaces there is no appraisal of the contribution MOL makes to these areas, their character or appearance.

The most recent review of the borough's existing and potential new MOL, OOLTI (Other Open Land of Townscape Importance) and Green Chain designations was undertaken in 2006 as part of the previous LDF review. The RFU MOL was not included in the review but during this period a number of planning briefs and guidance reports were prepared for the Crane Valley (2005), Harlequins Stoop Memorial Ground, and Richmond College (2008) where reference is made either to the MOL designation in general, the DNR and Twickenham

Stadium. Planning policies over this period were contained in the adopted 2005 UDP. The 2005 Proposals Map not only showed the MOL on the RFU land but also included the whole of the Harlequins site and the playing fields of the adjacent Richmond College to the south of the A316 Chertsey Road. Both lie a short distance from the Twickenham stadium and are also used on match days for additional parking.

Both MOL designations at the Stoop and the Richmond College have been removed since 2005. The Harlequins ground also shares a common western boundary with the DNR corridor, within which are located an existing large car park adjacent to the A316, an internal access road and hardstands for catering facilities. No MOL buffer has been retained on the club's land adjacent to the DNR. A small remnant part of the rugby club's training pitch previously in MOL on Craneford Way was made into public open space with the construction of the apartments on Langhorn Drive but this land was subsequently designated OOLTI. The college sports field on the A316 is no longer subject to any landscape or planning open space designation.

The 2016 Pre-Publication Local Plan now includes a policy (SA 11) that relates specifically to Twickenham Stadium and supports the use of the grounds for major sports uses. The policy recognises the need to retain parking, servicing facilities and spectator services on site and includes a requirement "to protect, and where possible, enhance, the Duke of Northumberland River and associated Metropolitan Open Land".

The emerging Local Plan also includes a policy for Green Belt and MOL (New Policy LP 13) which states that:

"Appropriate uses within Green Belt or Metropolitan Open Land include public and private open spaces and playing fields, open recreation and sport, biodiversity including rivers and bodies of water and open community uses including allotments and cemeteries."

The RFU land included in MOL does not accord with the uses considered by the borough to be fitting or sympathetic to the designation. Furthermore, the emerging Local Plan contains two new policies (LP 12 'Green Infrastructure' & LP 18 'River Corridors') that list the borough's network of major watercourses, including the River Thames and the DNR. These policies provide substantial protection for the natural, historic and built environment of all the borough's watercourses and their immediate settings, and make the retention of the MOL policy for the DNR unnecessary duplication and no longer justified.

Summary

The MOL designation of the narrow band of the RFU's land at the Twickenham Stadium beside the Duke of Northumberland River is arbitrary in its extent and the alignment of the boundary across the stadium grounds does not relate to any existing physical features or land uses.

The designation is inappropriate in terms of its urban character, scale, use and appearance, when judged against the criteria set out in the London Plan and emerging local Plan Policies. The large areas of parking, storage compounds and disparate collection of associated permanent and temporary service buildings on the RFU land are ancillary to the main sports activity at the stadium and, in isolation, provide no specific leisure, recreational or public open space function.

The precedent for removal of the MOL designation has been established at neighbouring sports grounds adjacent to the DNR. In circumstances similar to those at the RFU, LBRuT did not considered it necessary to retain MOL over areas used for parking and servicing facilities at the Harlequins ground, or require parts of the designation to be retained to provide a landscape buffer beside the DNR corridor. Where public open space was retained at the Stoop its long-term protection in policy terms was achieved by using the borough's local OOLTI designation.

The MOL designation is not continued across the neighbouring borough boundary into Hounslow to the north of Whitton Dene, where the DNR corridor and other incidental public open spaces are given adequate protection by a local open space designation.

The sole purpose of the MOL designation on the RFU's land is to protect the setting of the DNR corridor. However, any direct physical link between the river and the stadium grounds is prevented by the boundary fencing, which is an important security measure. Where visible from the public footpath on the riverbank, the stadium and parking areas are a substantial and discordant element.

The narrow river corridor is generally well vegetated and the contained landscape has a tranquil and intimate semi-rural sense of place. The character of the MOL within the stadium is distinctly different to that of the DNR. The RFU land is not clearly distinguishable from the closely associated mixed built form of Rugby Road, Whitton Road and the wider Twickenham area and, therefore, does not meet the London Plan requirements for the designation of MOL. In terms of its function and appearance, the whole of the RFU land forms an integral part of the urban grain of the area and there are no visual characteristics to associate this land with the DNR MOL.

The retention of the MOL designation on the RFU land as a landscape buffer is no longer appropriate in terms of the emerging Local Plan. The MOL designation will be an unnecessarily duplication of future planning policies that provide specific and fitting protection to the DNR and other major watercourses in the borough, the green corridors they run through and their settings.

Appendix A

Baseline Issues and Opportunities Report (Amec Foster Wheeler)

Defence Infrastructure Organisation

Kneller Hall Local Plan Representations

Baseline Issues and Opportunities Report

August 2016

Amec Foster Wheeler Environment
& Infrastructure UK Limited

Report for

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Document revisions

No.	Details	Date

1. Introduction

1.1 Background to the Project

Amec Foster Wheeler Environment & Infrastructure UK Limited (Amec Foster Wheeler), in conjunction with Bilfinger GVA, was commissioned by Defence Infrastructure Organisation (DIO) to undertake a study investigating opportunities for the future development potential of Kneller Hall in Whitton near Twickenham, London. Kneller Hall is currently the location of the Royal Military School of Music (RMSM) and Corps of Music Army Headquarters (CAMUS HQ). The site is approximately 9 hectares (ha) in size and is situated at central National Grid Reference [NGR] TQ147742.

A plan defining the boundary of the site on the Ordnance Survey base drawing is appended to this report.

1.2 Purpose of this report

This report has been produced for the purpose of summarising the baseline analysis & identifying the potential opportunities and constraints related to future development at the Kneller Hall Site. The following topics are summarised:

- Heritage and Historic Environment (including condition of the Listed Building on the site)
- Landscape and Urban Context
- Highways and Transport
- Utilities
- Ecology
- Land Quality

1.3 Site Context

RMSM is responsible for delivering individual Phase 2 and 3 musician training for the Army. CAMUS HQ is responsible for providing direction and professional advice on Army Music matters and for providing trained musicians. CAMUS HQ includes the Corps HQ and Corps Museum. The two organisations have been located at Kneller Hall since 1857, founded by Field Marshall HRH the Duke of Cambridge, who was then Commander-in-Chief of the British Army.

Kneller Hall itself is the large and grand building fronting Kneller Road to the south west of the site. It was constructed originally in about 1709 to 1711, apparently designed by Sir Christopher Wren under the patronage of Sir Godfrey Kneller. Undergoing numerous changes of ownership, the original building was extended and altered twice around 1750 and 1815. The house was acquired by the Government for a teacher training college in a rundown and dilapidated state, necessitating extensive demolition and rebuilding, which was undertaken in 1848. This building is the one still standing today, designed by George Mair in the then popular neo-Jacobean style, and is Grade 2 listed along with a pair of gate piers and the walls in part. Since 1857, the site has been the home of RMSM apart from a brief period during the Second World War when it served as General HQ, Home Forces.

In addition to the listed assets fronting Kneller Road, the rest of the buildings on the site are generally 1950s stock in the main. These are primarily accommodation and welfare facilities, with some additional piecemeal building from the 1970s onwards providing music practice rooms and sports facilities, all serving the RMSM. There are also extensive sports grounds and open space covering about 60% of the site to the east, again serving the RMSM.

2. Summary of Baseline Reporting

2.1 Heritage and Historic Environment

The site currently houses the Royal Military School of Music. The western part of the site has been developed and contains a number of structures associated with the school. The eastern part of the site, formerly parkland and gardens associated with Kneller Hall, is in use as sports fields.

The site contains two Grade II Listed Assets: Kneller Hall and Boundary Walls RMSM (Historic England list entry number 1065380) and Gate Piers to RMSM (Historic England list entry number 1065381). Any alteration, extension or demolition of the listed assets will require Listed Building Consent and consultation with relevant stakeholders. Changes to the setting of the listed building would need to be considered in any development proposal, and historic building recording would likely be required prior to any alteration of these structures.

Based on a search of the Greater London Historic Environment Record (GLHER), Historic England's National List for England and a review of historic mapping and various online sources the archaeological potential of the site has been assessed.

The site is located within the Archaeological Priority Area of Whitton medieval settlement, and is believed to have the potential to contain previously unidentified prehistoric, medieval and post medieval remains. The buildings in the western portion of the site are likely to have disturbed any below ground archaeological remains in their vicinity. However, there is the potential for well-preserved archaeological remains in the undisturbed parts of the site, such as the sports field to the east.

If archaeological remains are present, they are likely to be of local or regional importance. Impacts to these remains could be satisfactorily mitigated through a programme of archaeological investigation within a timetabled schedule of works. As such, archaeological remains are unlikely to give significant issues in relation to planning consent or any programme of development at the site.

Condition of the Listed Building

A recent visual condition inspection of the listed building on the site was carried out in April 2016. Kneller Hall needs major structural works to be carried out in order to bring the building up to a satisfactory condition. The failing structure (in part) has led to areas being closed off which in turn is creating additional wear and tear to other areas of the building. The building will require considerable ongoing investment in order to remain functional.

2.2 Heritage Assets

The National Heritage List for England includes two entries for heritage assets located at Kneller Hall. These are:

- Kneller Hall and Boundary Walls Royal Military School of Music, grade II (List Entry 1065380); and
- Gatepiers to Royal Military School of Music grade II (List Entry 1065381).

Kneller Hall is a neo-Jacobean mansion originally built in 1709-11 and elaborated to its present form by George Mair in 1848. Mair's work is described by Twickenham Museum as an extensive rebuilding of an earlier house, retaining only some elements. The building presently occupying the site is considered to be the third house with a 17th century building predating the 1709-11 Queen Anne mansion. An undated view of the Queen Anne Mansion shows the property to consist of a nine bay, double pile house with cupola and five bay paired pavilions to the east and west side of the property. It appears that the house is of two stories, with an attic and basement. The house is shown standing in extensive, formal landscaped grounds with a range of outbuildings, likely to include a stable and some garden hot houses. This house is expanded in the early 19th century for Charles Carver, by Philip Hardwick, the architect of Euston Station, among other major

London projects. Potentially columns within the east most room at ground floor level relate to the work of Philip Hardwick, but where decoration survives, or was present within the building, other than these columns, and possibly one other room, it is uniform, relatively simple and neo Jacobean in character; rooms retaining interior decorative features are confined to the ground floor of the main house, other than the chapel. The staircases are generally utilitarian, and one, to the east side of the house, is certainly a later addition. In the west-most ground floor room the walls are decorated with a cast of elements from the Parthenon Frieze inset as panels into the wall. The subject of the frieze is generally considered to be a religious parade in Athens. It might well be the case that this is considered an appropriate decorative scheme for the music school.

It should be noted that Hardwick was working to improve a country house for its owner; Mair, however, was converting or rebuilding a house, under government ownership as a training institution. The plan of the building would appear to reflect this with more decorative rooms confined to the ground floor of the house or focusing upon the chapel, which is spread between the first and second floors.

The interpretation of the building, and the extent of Mair's work, should be possible to study as the London Metropolitan Archive holds 20 files of drawings under reference ACC/1155 related to his work at Kneller. Any detailed proposals for the listed building should be informed by an examination of this material.

The house, as it survives now, is an 'E' plan form with projecting, centre entrance bay and pavilions flaking the south front, erroneously described as the east elevation on the list description. The house is of a neo-Jacobean style of fifteen bays over three stories. At the rear of the house there is a partial basement. Elements of the plan of the building, with the central hall and the use of a decorative screen at the frontage, in some ways, resemble the plan of Hardwick New Hall by Robert Smythson, construction dated to 1590-97. In terms of plan the use of a central hall running through the building with wings arranged around spine walls perpendicular to the hall, and the staircase placed to one side away from the hall provide some level of resemblance to the ground plan of Hardwick Hall.

The exterior, especially the south front, is particularly elaborate. The central bay is dominated by two stories of stained glass filling the bay windows. Much of the glass records events and members of the music school. To the interior the glass lights open onto a chapel with upper gallery at second floor level. This is the most impressive interior space within the building. To the exterior the bay is flanked by onion-domed towers that rise one storey above the parapet level. The end bays, and the frontage of the building is enlivened with quoins, pilasters, decorative parapets, coats of arms and the screen of arches at ground floor level.

The north, garden front of the house presents a more restrained façade. The north-west three bays of the house are covered by the north-west wing, where it connects to the main block. The central portion of the house is of seven bays, with a projecting central bay with two stories of bay windows at the ground and first floor level. The east central bay contains a projecting doorway. The east extent of the house includes a modern stair added to the rear and some evidence of considerable rebuilding.

The north-west wing is considerably more utilitarian in appearance than the body of the house, it is built over nine bays at the ground floor and four stories within the same height as the main house. The wing is built of stock brick with red brick gauged arches for window heads and a band at parapet level. Unusually, when compared to the elaborate elevations of the main house this wing is visible on the main approach to the house from the west and impacts upon views of the house from the rear. Twickenham Museum attribute the wing to the ownership of the Primes family. The Primes bought the house in 1757 and Samuel Prime died in 1813. Twickenham Museum state the servant's block was extended as part of the work of Mair, and this is evident in the general construction of the block, and the uniform use of horned sash windows. The plan of the servant's block, as it currently stands was published in 'The Builder' for 9 February 1850. Due to the dominance and scale of this part of the house it can only be the case that it was raised to its present height as part of Mair's improvement works. The wing building significantly detracts from the symmetry, detail and character of the main house.

Within the boundary wall are four gate piers. Two flank an earlier gateway which would have led to the front of the house, and two others flank the railings to the south of the house. The listed gatepiers are decorated with swags and have swagged urns. East of the house a further pair of gate piers have no swags and simpler urns. These gatepiers are not included on the list description.

The list description for the house makes reference to the boundary wall. The best surviving areas of walling are constructed in stock brick laid in Flemish bond with a single chamfered brick course and soldier course capping the wall. There are many areas of repair and rebuilding. There are also areas where the chamfered course and soldier courses have been lost and in some cases the wall has been totally rebuilt in modern brickwork. It may well be the case that the six gate piers predate the wall and conversion or rebuilding of the house to a neo Jacobian style by Mair and possibly are indicative of the work undertaken by Charles Calver (owner 1813-1832), supervised by the architect Philip Hardwick.

The list descriptions do not include the guard house, at the west entrance to the base. Whilst this building is not listed it is a fine, characterful representation of the military functions undertaken on site and is worthy retention and enhancement. The building appears to be, of, at least two phases of construction, but is built of stock brick with a pitched tile roof, cupola with clock and weather vane. The entrance to this building has a simple projecting porch supported on four columns.

Just to the north of the guard house is a Victorian, purpose-built gymnasium. This building has been subject to an extensive, but limited programme of repairs, including large concrete braces added to the buttressing of the building. It is apparent that this building is beyond reasonable reuse and repair.

Other buildings within the grounds are of more recent construction and are purpose-built for the needs of the school, however their locations and arrangement, generally to the north-west of the site, are separated from the main body of the house by the north-west extension and belts of planting. This separation reduces the impact of development in this area upon the listed building and ensures views across the site from the rear of the house remain open.

2.3 Opportunities for Enhancement

The list description for Kneller Hall, whilst not of the modern type, clearly states that the later additions to the building are of limited interest. In this case the wing attached to the north-west corner of the house significantly detracts from views of the house from the rear and from the west. A more considered replacement that meets the listed building to the west flank wall of the pavilion improving the symmetry of the rear elevation would offer an enhancement to the listed building. Within the present extension, whilst being clearly subordinate to the listed building, the extension is constructed from sympathetic materials, it lacks the detail and character to sympathetically meet the main body of the listed building. Any removal of this wing should be informed by a study of the archive material held by the London Metropolitan Archive and an appropriate programme of archaeological building recording.

The consolidation and planning of buildings presently to the east of the house would open up views of the listed building and ensure the preservation of the character and openness of the Metropolitan Open Land and potentially contribute to improving the character of the landscape.

To the rear, north of the house, the bands of trees which currently terminate views to the north, focusing views upon the band stand, ensure more recent buildings, to the north and west of the house, are screened and currently have a limited impact upon the setting of the listed building. The replacement of the purpose-built college buildings, north of the guard house, and north west of the listed house, with new buildings designed with more sympathetic detailing would enhance the setting of the listed building contributing to its significance. Preserving the relatively formal layout of the existing buildings by following a grid plan arranged around squares and courtyards will ensure the memory of the military use of the site continues and offer a continuity of character, but one which will enhance the setting of the listed building and the relationship of the buildings to the wider landscape. The use of more sympathetic detailing and materials and a consideration of the proportion of wall to fenestration in any new buildings would enhance the character of the site.

The enhancement of the area surrounding the site can be achieved through the removal of military security paraphernalia from the boundary walls of the site. In a number of cases this takes the form of a horizontal bar with spikes, sometimes with addition barbed wire, or utilitarian palisade railings constructed above a

stock-brick wall. Beyond the brick wall boundaries are of concrete slabs wall topped with stranded barbed wire. To the south side of the site this would improve the surrounding amenity for residents, the setting of the listed house and the immediate appearance of the walls adjacent to the four listed gatepiers. The walls, of course, are included in the list description and, in a number of areas, there has been extensive modern rebuilding, especially to the north side, where the brick wall incorporates a number of expansion joints. The repair of walls, where the chamfered brick course and soldier course capping has been lost, would also enhance the character of the site..

2.4 Landscape and Urban Context

Designations and Character

The site lies within the urban context of Richmond upon Thames and is identified as lying within the borough character area of Whitton and Heathfield. This broad character area consists predominantly of inter war residential estates of terraces or semi-detached housing typically set back from the streets within hedgerows and few street tree. Kneller Hall and Twickenham Rugby Grounds are identified as landmarks.

There are no constraining landscape relevant designations within or close to the site, however various 'landscape/ townscape' elements and features form a part of the setting around the Listed Building. The western part of the site, where existing buildings (ranging from one to three storeys in height) and hardstandings are concentrated, has a very secure and inward looking nature bounded by high brick walls, topped by security fencing. By contrast, the eastern part is very much more open in nature, with the immediate context of the extensive sports pitches being akin to an open urban parkland, with fencing only to the boundaries. In combination with the tree cover on the site, the high presence of peripheral site trees provide the adjoining streets with a verdant character.

Due to its scale, Kneller Hall (four storey) is identified as being visible from numerous points (in both glimpsed views and framed vistas), as well as boundary brick walls and trees. Of particular importance is its impressive south facing frontage and its ogee cupolas. Of relevance are the following dominant materials and features:

- Views and vistas of Kneller Hall
- Mature trees and wide green verges
- Stock and red brick, painted brick, render and slate roofs

Elements of the legacy of the military use of the site, such as security fencing atop the boundary walls and other security apparatus, could be removed as part of a comprehensive redevelopment of the site. This could also extend to the large areas of hardstanding in the western half of the site. In conjunction with the replacement of the buildings which are not part of the setting of the listed building, the removal of these detracting elements could greatly improve the setting of the listed building, whilst enabling opportunities for future development.

Sections of brick wall, gate piers, metal railings (being listed in part around Kneller Hall itself) are considered positive characteristics of both the site and adjoining Whitton Dene road and Kneller Road and should be considered for retention/ enhancement.

Relevant Policy

The area is covered by the London Borough of Richmond Local Plan that consists of the Core Strategy (Adopted April 2009) and Development Management Plan (Adopted Nov 2011).

The eastern part of the site is identified as lying within Metropolitan Open Land (MOL). Policy DM OS 2 states that such land should be protected and retained in predominantly open use such as public and private open spaces. When considering development on land outside the MOL i.e. such as that within the western part of the site, the policy states 'any possible visual impacts on the character and openness of the MOL will be taken into account'. This should not be an undue constraint on development in the current developed part of the site, given a sensitive and informed design approach.

Tree cover within the site is covered by a blanket Tree Protection Order (TPO) though this has not been subject to an individual tree quality assessment. A tree survey and also a review of TPO status against tree quality (ascertained from the tree survey) should be procured prior to development at an early stage in the design process to enable potential impacts and opportunities to be fully considered.

Views and Visual Context

The site has an urban context, surrounded by residential areas to the north, west, south and east. The existing developed nature of the site reduces the potential for built development to adversely affect views from sensitive receptors. The density of the surrounding streets also minimises long views of the site.

Key sensitive receptors include:

- Residents on Whitton Dene, Kneller Road and Amberside Close
- Long vistas from Kneller Road to the west and Murray Park to the north west of the site

Surrounding residential receptors will be sensitive to the introduction of new built development within areas currently undeveloped (such as within the MOL or very close to Whitton Dene, Kneller Road or Amberside Close frontages) or the introduction of a built form of a type and scale that is incongruous to that present within existing views. This should not prove to be an undue constraint within the western part of the site, given a context-specific approach to new or refurbished building design.

A plan which examines the urban design context of the site is appended to this report.

2.5 Highways and Transport

Location

The site is bounded on three sides by residential streets, typical of the Whitton area, from which the site is accessed presently. There are good standard, safe pedestrian and cycle links to adjacent roads in the vicinity of the site providing onward connections to local facilities. Opportunities to develop further dedicated cycle facilities within proximity to the site are constrained. However, it is considered that the available cycle facilities would be enough to encourage cycle use in the local area.

The Kneller Hall site has good access to public transport being served by three regular local bus routes (Routes 281, 481 and H22) and one infrequent service (Route 681) that stop within easy walking distance of the main site access. These provide direct connections to the National Rail and London Underground networks. The site is thus served by up to 14 buses per hours during daytime hours (Monday-Saturday) and at least eight buses per hour in the evenings and on Sunday. Of note is Route 281 which is a 24 hour service providing half-hourly frequency, every day.

The site is also conveniently located close to local overland and London Underground train services at Whitton, Twickenham and Hounslow East stations.

Highway Access and Safety

There are currently three points of vehicular access into the Kneller Hall site from the surrounding highway network:

- Main gate located on the B361 Kneller Road
- Secondary gate with listed gate piers some 25m south-east of the main gate
- Lodge gate a secondary un-manned, gated access 35m east of the B361 Kneller Road/ Warren Road junction.

In addition, there is a former vehicular access onto Whitton Dene, approximately 40m south of the junction with Kneller Gardens, which is currently blocked up by an extension to the boundary wall and therefore not in use.

All of the accesses noted have limitations presently, none of which are insurmountable. Indeed, redevelopment offers opportunities to improve sightlines, widths and mode of operation. An Access Strategy could be developed to enable the best and efficient use of the accesses, providing a hierarchy of access points which might enable segregation of pedestrians, cars and service vehicles.

Crash data has been obtained and very few accidents have been recorded over the latest available period (2009-2014).

Parking

Internal roads are of variable standard in terms of width and construction extending north from the main gate towards the accommodation blocks, practice rooms, gym and cookhouse, and south towards the existing Officer's Mess and sports facilities. Car parking areas are dispersed throughout the site and provide 139 spaces presently.

Highway Capacity

A site inspection during the morning peak hours was undertaken in May 2016. Observations indicate that the network within the immediate environs of the site is operating satisfactorily with no adverse queuing. Junctions observed included Kneller Road-Whitton Dene-Nelson Road, Nelson Road-Warren Road and Kneller Road-Warren Road. Further comprehensive assessments of highway capacity will be undertaken as future development options are brought forwards.

2.6 Utilities

The following utilities supplies have undergone high level assessment:

- Gas
- Water
- Electricity
- Foul and Surface Water Drainage
- Telecommunications

There are no known capacity issues on the site following record checks and anecdotal evidence from site operators. The site is well served by incoming services with numerous connection points to the surrounding networks, mainly to the western end of the site where existing built development is concentrated now and where development will be in the future. Information on the sewer network has not yet been forthcoming but could be sought to inform into any redevelopment proposals.

Further comprehensive assessments of Utilities will be undertaken as future development options are brought forward, especially with regards to capacity.

2.7 Ecology

Designated biodiversity sites

- The site lies within the Impact Risk Zone (IRZ) for the South West London Waterbodies Ramsar site/ SPA located 6km to the south-west, which is designated as a result of the internationally important populations of birds that it supports.
- The site also lies within the IRZ for Syon Park Site of Special Scientific Interest (SSSI), and there are a further eleven Local Nature Reserves (LNRs) within 5km of the Site. Of these, there is the potential for development at the site to result in minor adverse effects on Syon Park SSSI, Hounslow Heath LNR, Crane Park Island LNR and Ham Lands LNR, due to their proximity to the site and/ or the sensitivity of the habitats and species for which they are designated.

- The two Duke of Northumberland's River SINCs and Crane Corridor SINC are located within approximately 0.5km of the Site. Certain types of development activity (e.g. increased recreational usage arising from residential development) could impact the valued habitats and species within these sites.

The proposed development area is unlikely to be of sufficient size, scale or nature to adversely affect these sites but any proposed development will need to be screened for its potential to adversely affect them, alone and 'in combination' with other plans and projects, in line with current Natural England guidance. Prior to development, early consultation with Natural England and the owners or managing organisations of these sites is recommended to determine whether any development proposals are likely to have an adverse impact on the habitats or species for which these sites are designated, and if so, what mitigation may be required.

Habitats

Within the site, areas of amenity grassland, hedgerows, buildings and hardstanding, which make up the majority of the habitat, are of limited biodiversity value and would not pose a constraint to development. There are also a large number of trees on-site, the cumulative cover of which has biodiversity value, notwithstanding those individual trees that have value in and of themselves as being of ancient or transition veteran status.

Development could be accommodated provided trees are retained or where, loss is unavoidable, the extent of removal should be kept to a minimum and be compensated through additional planting of native species of local origin that are suitable for site conditions. Future development, sensitively designed, would clearly gain benefit from the established natural capital on site.

Bats

- Buildings and trees within the site have varying potential to support roosting and hibernating bats.
- Of the many existing trees on site, only 11 individual or stands of trees have been found to have the potential to support roosting bats. The tree cover overall provides moderate forgaging habitat for any bats present, with limited connectivity to a small number of private gardens adjacent to the site boundary.
- With regards to buildings, of the 30 existing structures, only 11 have been found to have the potential to support roosting bats. Most of these are within the MOL area and have low potential for bats.
- Only two buildings have high potential for bats, Kneller Hall itself and the adjacent Guardroom. These buildings are within the listed building and its immediate setting which would be retained and enhanced in any case for heritage reasons. Refurbishment/ repurposing works to these buildings will be highly capable of accommodating bat mitigation measures, if any required.
- Prior to any future development, further survey work will be required to confirm the presence or absence, type and status of any roosts present in any trees or buildings that are impacted throughout all phases of a future development. If the loss of any trees or buildings found to support roosting bats is unavoidable, an application to Natural England, which details an appropriate mitigation strategy, will be required.

Breeding birds

- Given the relatively small amount of habitat available on-site and the generally urbanized surroundings, a breeding bird survey would not be required. On-site habitats are unsuitable for the wintering birds for which the South West London Waterbodies SPA/Ramsar site, which includes Kempton Park Reservoirs SSSI, are designated.
- Potential breeding habitat is present within the site for black redstart; a species which is listed on Schedule 1 of the *Wildlife and Countryside Act 1981*, thus receiving additional protection from disturbance. This is not a constraint that would preclude development of the site, however.

Prior to the start of any works during the breeding season, a suitably qualified ecologist should survey the works area and a suitable buffer around it (typically up to 200m) for the presence of active nests of this species. Suitable mitigation would need to be put in place to avoid disturbance to the nesting Schedule 1 bird species, until the dependant young had departed.

- To ensure compliance with the *Wildlife and Countryside Act 1981*, any vegetation clearance, necessary arboricultural works or demolition/ refurbishment of buildings must, wherever possible, be completed outside of the breeding bird season (generally March to August inclusive). Should any works be required during this period, a suitably qualified ecologist should survey the vegetation prior to the work commencing in order to check for the presence of any active nests. If an active nest is found, it would have to be left undisturbed until the young birds had fledged.

Opportunities

The limited ecological issues outline above will not limit development provided that the majority of trees are retained and mitigation strategies are adhered to. Indeed, there are numerous opportunities which a development of the site affords:

- Future scheme design could form part of the wider Green Infrastructure network, enhancing connectivity with off-site habitats whilst incorporating recreational facilities (such as playgrounds and footpaths) and elements of a sustainable drainage system or SuDS (such as ponds and swales).
- A proportion of retained grassland could be managed to promote bio-diversity, particularly in the vicinity of retained trees.
- Habitat creation could focus on legally protected/ priority species which occur in the surrounding area.
- Bat and birds boxes should be incorporated in retained and new trees and buildings.

2.8 Land Quality

Geotechnical

The preliminary geotechnical assessment indicates that ground conditions potentially pose constraints, due to the presence of made ground associated with hardstanding and existing development in the north and west of the site, which may cause settlement and ground stability issues. A ground investigation will be required, which should not preclude development in any case.

Superficial deposits onsite are variable and are likely to present different engineering properties including low bearing resistances and long term settlement issues in head deposits and high bearing resistance and little to no long term settlement issues in gravels. Shallow strip footings and ground supported floor slabs may be appropriate in gravel areas but ground improvement or piling may be more appropriate in the head areas. Historical boreholes logs indicate groundwater to be within the superficial deposits which increases the risk of ground instability and temporary protective measures to prevent excavation collapse will need to be considered as is usual in common good practice. There is the potential for dewatering of excavations where local groundwater is intersected.

Other minor geotechnical constraints identified include a moderate potential for shrink swell clays across the site and a number of mature trees present onsite and at site boundaries. An arboricultural survey will need to be undertaken to feed into the NHBC/ LABC-compliant foundation design of future development.

Contamination

Whilst other on and off site sources of contamination have been identified, the likelihood for, and magnitude of, any contamination is considered to be low. As such, any potential contamination would not preclude development provided that suitable mitigation measures are adopted and adhered to.

The initial Contamination Conceptual Model (CM) has identified potential contaminant linkages mostly relate to the made ground anticipated beneath hard standing, buildings and the tanks & substation in the west of the site. The identified pathways include inhalation of gases and fibres, dermal contact and ingestion relating to future site users, and degradation and accumulation of gases in relation to buildings onsite. These are likely only to be of significance in soft landscaped areas and where gases can accumulate in buildings. Adequate gas/ vapour protection measures in buildings in affected areas of the site, if any, should be employed.

Recommendations

In the context of the NPPF, potential sources of contamination are not so significant that they would preclude future development of the site. A detailed walkover and review of site records should be undertaken to further develop the initial desk study and gain a more detailed understanding of current and historic site uses and practices. The extent of issues will be determined by an intrusive ground investigation prior to development, with the data obtained informing detailed design and any abnormals associated with the ground conditions. It is recommended that gas monitoring is carried out in areas of suspected made ground to confirm the presence or not of soil gas at concentrations of concern and therefore determine any remedial requirements to render the site suitable for use. In addition it is recommended that a detailed UXO desk study is undertaken prior to further investigation of the site.

Appendix A
Relevant Drawings

38305-LEA-PDD-P001 Site Location Plan

38305-LEA-PDD-P003 Urban Design Context Analysis Plan

38305-LEA-PDD-P004 Development Opportunities and Constraints Plan

N

Key

Site Boundary

0 m 50 m

Scale 1:1,250 @ A1 (1:2,500@A3)

Client

Defence Infrastructure Organisation

Kneller Hall

amec foster wheeler

P001
Site Location Plan

July 2016

38305-LEA-PDD-P001 Site Location Plan.dwg QuinR

Table A: WHITTON AND HEATHLAND CHARACTER AREA - Supplementary Planning Document (July 2014)

1 The High Street
Strong architectural character, with low rise (less than 3 storey) red brick buildings

2-3 Hazel Close and East of Hall Farm Drive
1930s residential areas. Organic street pattern to the west and a series of north-south streets to the east

5 Warren Road / Nelson Road
1930s two storey semi-detached or rows of housing set back from the main road

6 Kneller Road / Hounslow Road and Surrounds
This area includes:

- Grade 2 listed Kneller Hall (main landmark of the area)
- Historic core of Whitton at the crossing between Whitton Dene and Kneller Road
- A number of local landmarks along Kneller Road and Nelson Road
- 1930s semi-detached and short terraces around key open spaces such as Murray Park
- Chase Bridge Primary School, playing fields and residential development to the east of the Site

N

Whitton Dene
Whitton Dene
Whitton Dene
Hounslow Open Space
Murray Park
Play area
Ss Philip and James Parish Church
Kneller Road
Kneller Road
Kneller Hall
Nelson Road
Seaton Rd
Whitton Tennis Club
The Cardinal Vaughan Memorial School Playing Fields
Spray Ln
Mogden sewage treatment works
Duke of Northumberland's River
Twickenham Stadium Rugby Ground
Chase Bridge Primary School
Hounslow Road
Nelson Road
Warren Road
Kneller Road - B361
Nelson Primary Schools
Nelson Road
St Edmund's Catholic Primary Schools
High Street
Towards Staines
Whitton Railway Station
Towards Richmond and Waterloo
Play area
Chertsey Road - A316
Duke of Northumberland's River
Twickenham Stoop Rugby Ground
Richmond Upon Thames College
400m (5 minutes walking distance)
800m (10 minutes walking distance)
40 DPH
40 DPH
30-35 DPH
30 DPH
24 DPH
25-30 DPH
25-30 DPH
6
1
2
3
5

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Key

- Site boundary
- Listed buildings
- Whitton and Heathfield landmarks:
  - Kneller Hall
  - Twickenham Stadium Rugby Ground
- Long distance views
- Character areas (see Table A)
- Net density (Dwellings/Ha)
- Main streets
- Railway
- Whitton Railway Station
- Whitton Dene and Kneller Road medieval routes
- Historic 'core' of buildings
- Key junctions
- Local landmarks:
  1. Duke of Cambridge Public House
  2. The Triangle Cafe
  3. The White Hart Inn Public House
  4. Ss Philip and James Parish Church
  5. The Admiral Nelson Public House
- Key open spaces
- Play areas
- Schools
- Pedestrian and pedestrian/cycle connections
- Barrier (Chertsey Road)
- Bridge

0 m 250 m
Scale 1:5000 @ A3

Client

Defence Infrastructure Organisation

Kneller Hall

P003
Urban Design - Context Analysis

amec foster wheeler

June 2016 38305-LEA-PDD-P003 Urban Design - Context Analysis.dwg rainp

Key

- Site Boundary
- Development Opportunity. Approximately 1.4 Hectares / 3.6 Acres
- Opportunity to enhance listed building setting
- Existing buildings and hardstanding within MOL - Opportunity to enhance Listed Building setting and MOL
- MOL - metropolitan open land designation
- Landmark Retained
- LB — Listed Building
- Opportunity to enhance, improve and/or rebuild later - wing of Kneller Hall
- Sensitive Views
- Historic/existing access points to site
- Key views of landmark
- Existing Trees (location estimated from aerial data)

0 m — 100 m

Scale 1:2000 @ A3

Client

Defence Infrastructure Organisation

Kneller Hall

amec foster wheeler

P004 Development Opportunities and Constraints Plan

Aug 2016

38305-LEA-PDD-P004 Dev.Opps & Cons Plan.dwg QuinR