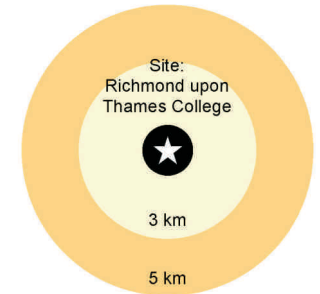
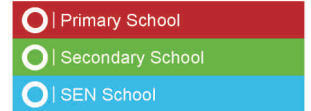


## Legend



Local Authority Boundary

### Education Provision



Source: Edubase, 2014

Within 800m of site:

- 1 Chase Bridge Primary School
- 2 St Richard Reynolds Catholic Primary School
- 3 St Richard Reynolds Catholic High School



Not to Scale

Note: All locations are approximate  
Contains OS data © Crown Copyright 2015

Project Title:

Richmond Education and Enterprise Campus Development

Figure Title:

Spatial Distribution of Primary, Secondary and SEN Schools in the Local Impact Area

For Information Only

Figure Number:

Figure 18.2

Date:

June 2015



## ***Open-space, Sport and Recreation Provision***

### Open-space and MOL

- 18.5.52 LBRuT has 13 hectares of public open space per 1,000 population<sup>43</sup>; the largest area of public open space per head of population of any London Borough. It benefits from many large open green spaces including Kew Gardens, Bushy Park (c.420 hectares) and Richmond Park (c.1,000 hectares). These regional parks<sup>44</sup> are all located within 5km walking distance of the proposal site. In addition, Old Deer Park (c.30 hectares), a metropolitan park is located 2.6km away.
- 18.5.53 The Council has commissioned a ‘Sport, Open Space and Recreation Needs and Opportunities Needs Assessment Study 2015’ to replace the ‘Sport, Open Space and Recreation Study 2008<sup>45</sup>’; this has recently been adopted by the Council and the draft findings have been used to inform this socio-economic assessment. The findings of the 2015 Study indicate that across the Borough generally open space scores above the thresholds set for quality and value<sup>46</sup>. The application site falls within the Twickenham analysis area within this Study<sup>47</sup>.
- 18.5.54 According to the ‘Open Space Assessment 2015’, overall, the Twickenham area has good coverage in terms of parks and gardens and natural and semi-natural greenspace. Any gaps are sufficiently served by other forms of open space<sup>48</sup>. The majority also score high in terms of quality and value. Crane Park, to the south-west of the application site ranks particularly highly in terms of quality and value<sup>49</sup> and provides a range of opportunities and uses for visitors. In terms of amenity greenspace, there is reasonable coverage. A number of the spaces within the Twickenham area are assessed as being high low quality, though the spaces close to the application site (Craneford Way Recreation Ground, Kneller Gardens, Moorhead & Bandy Recreation Ground) score highly. All of these spaces are assessed as high value. Kneller Gardens, to the south-west of the application site, holds a Green Flag Award for its quality<sup>50</sup>. There is an area of publicly accessible open-space to the north of Craneford Way West (to the west of RuTC, see Chapter 7, **Figure 7.1**) that supplements the designated public open space provision in the vicinity of RuTC.
- 18.5.55 In total, there are 15 areas designated primarily for play and social interaction

<sup>43</sup> LBRuT *Parks and Open Space Strategy 2008*

<sup>44</sup> As defined in Table 18.2 of the London Plan (as amended)

<sup>45</sup> London Borough of Richmond upon Thames (March 2007- updated March 2008) *Borough’s Sport, Open Space and Recreation Needs Assessment*

<sup>46</sup> LBRuT *Open Space Assessment* (April 2015) para 3.4/ 3.5

<sup>47</sup> LBRuT *Open Space Assessment* (April 2015) Figure 2.1

<sup>48</sup> LBRuT *Open Space Assessment* (April 2015) para. 4.3/ 5.3

<sup>49</sup> LBRuT *Open Space Assessment* (April 2015) Table 5.2

<sup>50</sup> LBRuT *Open Space Assessment* (April 2015) para. 6.4

involving children and young people in the Twickenham area<sup>51</sup>. All of these sites are assessed as high quality and value<sup>52</sup>. Craneford Way Recreation Ground Play Area scored particularly high with respect to quality (84%)<sup>53</sup>.

- 18.5.56 The subject site is located within St. Margret's and North Twickenham ward, it is predicted that there is 18% green space coverage in this ward<sup>54</sup>.
- 18.5.57 Craneford Way playing fields are subject to a number of open space designations; Craneford Way West (owned by LBRuT) is designated in the Local Development Framework as public open space (Policy DM OS6). The College playing field south of Craneford Way is not public open space<sup>55</sup>. A wider area including both playing fields is designated as Metropolitan Open Land (DM OS2) (see Chapter 7, **Figure 7.1**).
- 18.5.58 It is useful to have an understanding of the level and types of usage of on-site open-space to assist in assessing the likely effects arising from the proposed development (which will be undertaken at a later stage in this report). FORCE undertook a survey of users of the College playing fields on Craneford Way East between 20 March and 7 April 2012, at various different times which provides insight into usage (**Appendix 18.2**). The results indicate that a range of user groups dog walkers (25), youths (111), sports teams (2) and local residents (8<sup>56</sup>) utilised the facility over the course of the survey period. A number of other people also undertake personal fitness and training. Analysis of timings suggests that youths tend to use the facility during the week (likely to be linked to the proximity of RuTC), while mostly dog walkers access the fields during the weekend.
- 18.5.59 A further survey of activities and pastimes undertaken on the College playing fields was also provided by FORCE (**Appendix 18.2**). The findings of this survey show that the field is used for exercise, sport and recreation uses. Sporting activities include badminton (1), cricket (8), football (17), rounders (3), golf practice (2), jogging / running (15), rugby (2), tennis (7), hockey (1) as well as informal sport / ball games and team games (6)<sup>57</sup>. In terms of recreation, people use the fields for family activities/children play (24), dog walking (21), bike rides (21), walking (19), picnics (15), roller blading / skate boarding (13) as well as fruit picking (10) kite flying (7),

<sup>51</sup> LBRuT *Open Space Assessment* (April 2015) Table 7.2

<sup>52</sup> LBRuT *Open Space Assessment* (April 2015) Table 7.3

<sup>53</sup> LBRuT *Open Space Assessment* (April 2015) para. 7.4

<sup>54</sup> Richardson EA, Mitchell R. (2010) Gender differences in green space and health relationships in the United Kingdom. *Social Science & Medicine* 71: 568-575

<sup>55</sup> Craneford Playing Fields East was subject to a village green application, submitted by FORCE in 2011. The application was refused following an inquiry in 2013 as it is not public open space and is in the ownership of RuTC.

<sup>56</sup> Figures in brackets represent the total number of users that fell into each user group over the course of the survey period across a range of days and times of the day (20<sup>th</sup> March 2012-7<sup>th</sup> April 2012). Detailed information included in Appendix 18.2.

<sup>57</sup> Figures in brackets represent the number of responses received. The timeframe to which these response relate is not known.

looking at nature, bird watching (4) and other informal recreational activities.

- 18.5.60 The Heatham Alliance requested that the Crane Riverside Park Project and West London Green Chain and the River Crane Corridor be included in the scope of this assessment. The Crane Riverside Park incorporates the existing Crane Park and extends it westwards to include Feltham Marshalling Yards, Brome Fields and Pevensey Nature Reserve and eastwards to include a matrix of land including Mereway Nature Park, Kneller Gardens and Twickenham Junction Rough. The result would be a new linear Crane Riverside Park of some 98 hectares and linking Twickenham Station in the east to Hounslow Heath in the west<sup>58</sup>.
- 18.5.61 The proposed park runs along the West London Green Chain – a green wildlife corridor of some 30 kilometres in length that runs from Harrow in north London, along Yeading Brook and the Crane, to meet the Thames at Isleworth.
- 18.5.62 The River Crane corridor forms the greater part of the West London Green Chain, a largely unbroken green wildlife and amenity corridor of some 30 kilometres length.

#### Sport and Recreation Facilities

- 18.5.63 Overall, LBRuT is well provided for in terms of sport and recreation facilities, which are both publically and privately run. There are existing sports facilities on-site which includes a sports centre (including a 4 court sports hall) and fitness suite (30 stations) within the College and a grass playing pitch to the south of the A316 (comprising 7,420 m<sup>2</sup>). The College playing field situated to the south of Craneford Way is also located within the site boundary.
- 18.5.64 These facilities are used by College students, however the sports centre and pitches are also operated as a community facility for 43.5 hours per week, outside normal college hours (i.e 16.30-22.00 Monday to Friday and 09.00-17.00 Saturday and Sunday). This equates to 5.5 hours per day weekdays and 8 hours per day during the weekend. These opening hours apply during both term time and holiday periods.
- 18.5.65 The Council's 'Playing Pitch Assessment' includes an assessment of the grass, adult football pitch (located within the playing field to south of A316). Current play amounts to 2.5 matches per week<sup>59</sup>. The Football Association has set a standard number of matches that each grass pitch type should be able to accommodate without adversely affecting its current quality (pitch capacity). On the basis that this is a standard quality pitch, it is classified as overplayed by 0.5 matches per week by exceeding the level of play the site can sustain. Despite this, overall there is spare

<sup>58</sup> Crane Riverside Park Feasibility Study Interim Report 2008

<sup>59</sup> LBRuT *Draft Playing Pitch Assessment* (May2015) Table 2.11

adult pitch capacity across the Borough<sup>60</sup> (16 match equivalent sessions per week) and the Twickenham area (9 match equivalent sessions per week).

- 18.5.66 The College playing field on Craneford Way East accommodates one senior sized rugby pitch. The ‘Playing Pitch Assessment’ gives this pitch a standard quality rating and indicates that it operates under capacity<sup>61</sup> (by 2 match equivalent session per week) as there are no competitive matches played there. Overall, there is spare capacity for rugby pitches recorded across the Borough<sup>62</sup> (8.75 match equivalent sessions per week) and the Twickenham area (12 match equivalent sessions per week)<sup>63</sup> to meet existing and future demand. Playing pitch capacity across the Borough declines when sites where the Council is uncertain about the availability and genuine spare capacity of these facilities are discounted from the supply<sup>64</sup>. Craneford Way East is among the facilities discounted. The Assessment also identifies demand from clubs for additional training provision away from match pitches.
- 18.5.67 RuTC provided detailed information on community usage of the on-site sports facilities for a four week period during March 2015 (**Appendix 18.3**). This represents usage for a typical month. This information is summarised in **Table 18.1** below:

**Table 18.1 Community Usage of On-site Sports Facilities**

Facility	Sports Hall	Front Pitch (south of A316)	Craneford Way East
Hours utilised (March 2015) and usage rate (%) of total available capacity	142 (82%)	43.5 (25%)	13.5 (8%)

Over this period, on average, 37 people used the fitness suite facilities per week.

- 18.5.68 Harlequin FC also provided information regarding its use of Craneford Way West for children rugby activities during the 2014 / 15 season. The club hired the playing field from LBRuT for 20 days in total between September 2014 and April 2015. Detailed data is set out in **Appendix 18.4**.
- 18.5.69 In addition to these on-site facilities, there are a range of other facilities proximate to the Application Site. A review of SPOGO<sup>65</sup> has been undertaken as part of an audit of the main existing outdoor sports and recreation facilities within 1.5km of the development site, a reasonable walking distance, and these are listed below:

<sup>60</sup> LBRuT *Draft Playing Pitch Assessment* (May 2015) Table 2.17

<sup>61</sup> LBRuT *Draft Playing Pitch Assessment* (May 2015) Table 4.11

<sup>62</sup> LBRuT *Draft Playing Pitch Assessment* (May 2015) Table 4.13

<sup>63</sup> LBRuT *Playing Pitch Assessment* (May 2015) Table 4.13

<sup>64</sup> LBRuT *Playing Pitch Assessment* (May 2015) Table 4.14

<sup>65</sup> SPOGO is a sport and fitness finder, the database brings together the sports and clubs (under Sport England) and the fitness and leisure facilities (under ukactive). Available online from [www.spogo.co.uk](http://www.spogo.co.uk)

- Nuffield Health Club (Twickenham Fitness & Wellbeing Centre) is 100m west of the Application Site and is located within the Harlequin FC site. It provides a 16m indoor pool, fitness suite, dance studio and 3 squash courts;
- Twickenham Rifle Club provides a rifle range 200m southwest of the Application Site;
- Twickenham Cricket Club is located 800m from the Application Site and has a grass cricket pitch;
- Heatham House Youth Centre, 2 floodlit multi-use games areas (MUGAS) 800m east of the Application Site;
- Moormead Recreation Ground is 1,400m east of the Application Site. It provides 1 football pitch, 2no 7-a-side football pitches, 1 cricket pitch and 4 tennis courts;
- Strawberry Hill Golf Club is located 1,400m from the Application Site has a 9 hole golf club;
- Busen Martial Arts & Fitness Centre provides a Martial Arts Dojo and Fitness Suite 1,500m east of the Application Site;
- Rugby Football Union provides 1 floodlight rugby pitch 1,500m east of the Application Site;
- Brunel University, St Margaret's Campus provides 1 rugby pitch and 1 dance studio 1,500m east of the Application Site; and,
- Whitton Sports and Fitness Centre at Twickenham Academy is the closest Council run facility, located almost 2km from the Application Site. It provides a multi-purpose sports hall, MUGA, fitness suite and full sized 3G floodlit synthetic turf pitch.

18.5.70 Richmond Mencap provides sporting and social activities for people in the local community with learning disabilities.

### ***Community Facilities***

18.5.71 There are 12 libraries in LBRuT. The closest library to the Application Site is Twickenham library which is located on Garfield Road (1.1km). There is also a library in Whitton, which is approximately 1.9km from RuTC.

18.5.72 There are a number of places of worship and religious centres.

18.5.73 Twickenham Police Station is located 1.1km from the Application Site and is open 24 hours a day. The closest fire station is Twickenham Fire Station 2.6km.

18.5.74 The nearest community centre to the Application Site is the Dene Estate Residents Association (DERA) community hall, located 0.8km from the site. There are 6 other community halls/centres located within 5km of the site (listed in **Appendix 18.1, Table A18.6**).

18.5.75 There are six post offices within 1.5km of the Application Site; the closest of these are the branches on High Street and London Road in Twickenham town centre. These branches are both open Monday to Saturday.

18.5.76 These features are set out on **Figure 18.3**.

## **18.6 SENSITIVE RECEPTORS**

18.6.1 A full description of the proposed development scheme at is provided in Chapter 5 - Proposed Development. In summary, the REEC development comprises a replacement Richmond upon Thames College, a new secondary school, a new SEN school, a new Tech Hub, a replacement on-site sports centre, upgrading of the existing College playing fields south of Craneford Way and new residential development of up to 180 dwellings.

18.6.2 The likely sensitive receptors during construction and operational phases are carried forward from the baseline assessment and include: the local labour market, the housing market, education facilities, healthcare, community facilities and sport, open space and recreation facilities. The effects on 'on-site' receptors, users of the on-site playing pitch and playing fields, users of the Nuffield Health Club, Harlequin FC and the Council Depot, as well as Haymarket employees relocated to the proposed Tech Hub from the Teddington Studio site, were identified in the Council's Scoping Opinion as additional receptors for consideration and as such, have been included in the following analysis.

## **18.7 IMPACT ASSESSMENT**

### **Construction Phase**

18.7.1 This section identifies and assesses the scale and nature of the main socio-economic effects arising from this development during the construction phase.

18.7.2 For the purposes of the EIA, three phases of development are anticipated to take place, as follows:

- Phase 1 (2015-2017) – Construction and commissioning of main College building, Secondary School and SEN School / demolition of existing College buildings;
- Phase 2 (2017-2018) – Construction and commissioning of Sports Centre and pitches / STEM Centre / completion of external works / construction of first phase of residential development and access road / demolition of existing sports facilities and remaining existing College buildings; and

- Phase 3 (2018-2019) - Construction of Tech Hub / improvements to A316 Langhorn Drive junction/ construction of second phase of residential development / final landscaping works.

18.7.3 The proposed development will be undertaken in a number of phases which will enable the continuation of the College's education activities throughout the construction phase. The principle is that early phases of the College rebuild and the whole of the secondary school and the SEN school will be built and ready for opening for the autumn 2017 term.

### ***Predicted Effects***

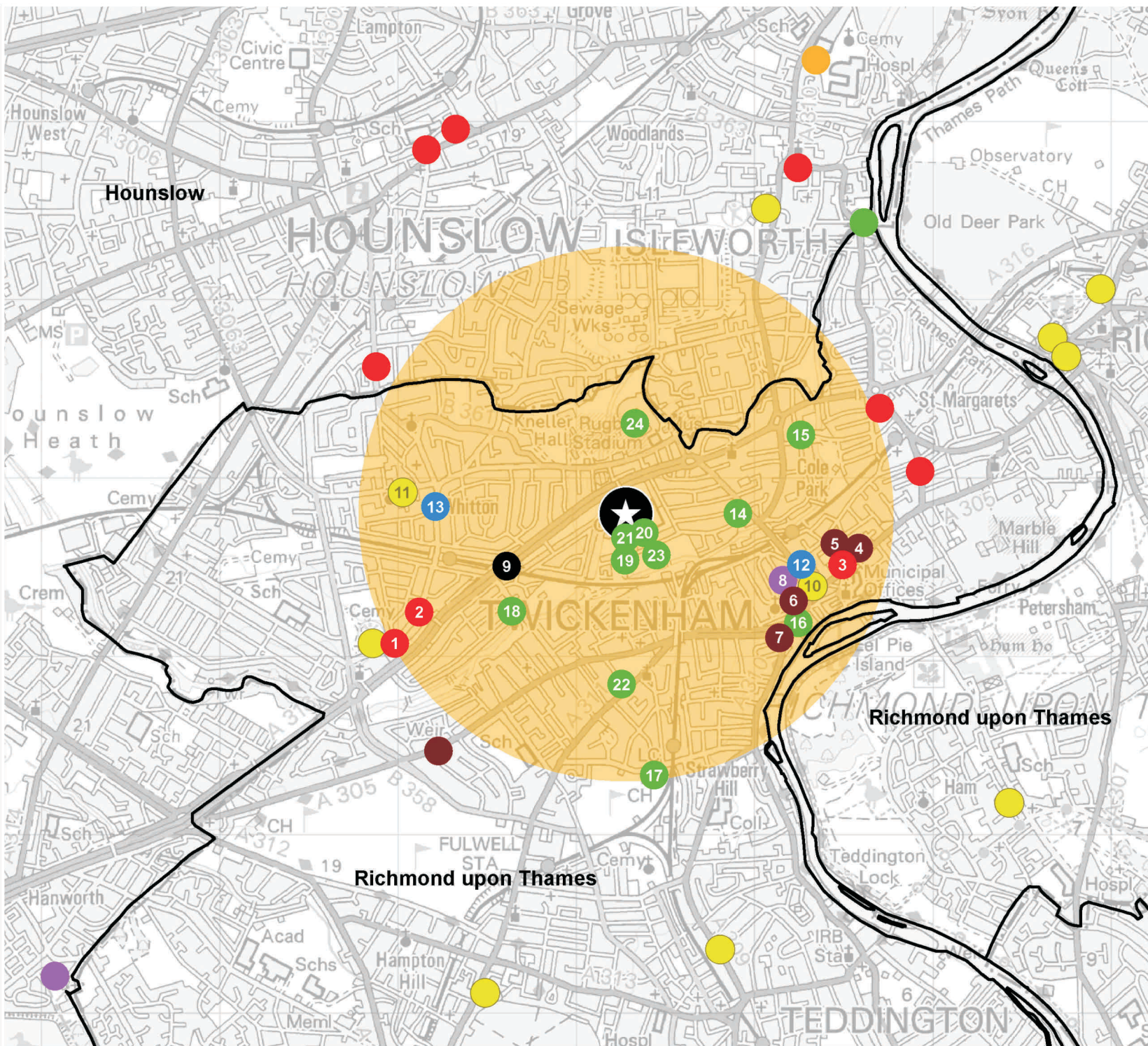
#### Construction Jobs

- 18.7.4 Construction employment is estimated on the basis of a construction cost for the built development. The construction cost (excluding fees, contingences and VAT) for the total REEC development is estimated to amount to approximately £100.9 million. Total purchase of goods, materials and services per construction employee is understood to amount to £89,970<sup>66</sup>. Applying this expenditure per job ratio to the estimate construction cost of the proposed development would produce approximately 1,120 person-years of employment.
- 18.7.5 In economic terms, there is a generally accepted convention that 10 temporary construction jobs are equivalent to 1 FTE. As such, the 1,120 person-years of employment could be expected to equate to some 112 FTE jobs in total over the 4.5 year build period.
- 18.7.6 National construction firms sometimes use their own permanent workforce on projects, but also employ contractors – with a proportion of construction workers drawn locally.
- 18.7.7 Larger development proposals such as the REEC development are often taken forward by larger developers with a more geographically footloose pool of employees and contractors. Nevertheless, based upon experience and as measures are in place to encourage full and fair employment opportunities, training and education to ensure local recruitment and to raise local skills levels information (as detailed in the Community Strategy associated with this development), it is reasonable to expect that a proportion of the construction jobs created by the proposed development could be taken up by the local workforce in LBRuT.

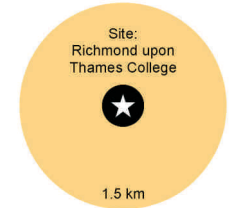
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<sup>66</sup> ONS Annual Business Survey 2012 (2014 release) based on the total purchases of goods, materials and services per construction employee





## Legend



Local Authority Boundary

**Dentist**

- 1 Eye Smile Limited
  - 2 Dhiman Dental Surgery
  - 3 St Johns Health Centre
- GP**
- 4 The York Medical Practice
  - 5 Oak Lane Medical Centre
  - 6 The Acorn Group Practice
  - 7 Cross Deep Surgery

**Hospital**

**Emergency Services**

**Community Facility**

**Library**

**Post Office**

**Sports Facility**

- 8 Twickenham Police Station
- 9 DERA Hall
- 10 Twickenham Library
- 11 Whitton Library
- 12 Twickenham High Street
- 13 High Street
- 14 Heatham House Youth Centre
- 15 Moomead Recreation Ground
- 16 Busen Martial Arts & Fitness Centre
- 17 Strawberry Hill Golf Club
- 18 Kneller Gardens
- 19 Twickenham Rifle Club
- 20 Twickenham Fitness & Wellbeing Centre
- 21 Harlequins Rugby Club
- 22 Twickenham Cricket Club
- 23 Craneford Way Recreation Ground
- 24 Rugby Football Union



Note: All locations are approximate  
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Project Title:  
Richmond Education and Enterprise Campus Development

Figure Title:  
Spatial Distribution of Existing Community Infrastructure Relative to the Application Site

For Information Only

Figure Number:  
Figure 18.3

Date:  
June 2015



- 18.7.8 Following the uplift in construction activity in London in recent years, it is likely there will now be a supply of local workers with construction skills and businesses which have developed to support / supply this activity.
- 18.7.9 In addition, it is likely that some businesses in the local area, as well as in the London economy, would benefit from the trade linkages that would be established to construct the development. The use of local suppliers is encouraged in the Construction Logistics Plan. This means that further indirect jobs would be supported locally in suppliers of construction materials and equipment. Local businesses would generally also benefit to some extent from temporary increases in expenditure as a result of the direct and indirect employment effects of the construction phase, for example, as construction workers spend wages in local shops and other facilities.
- 18.7.10 The construction industry has a relatively high employment multiplier with an indirect and induced employment multiplier of 1.78<sup>67</sup>. By applying this multiplier, it is estimated that the scheme could be expected to support 87 FTE indirect and induced jobs.
- 18.7.11 Having regard to the above, the construction effects of the proposals – from a socio-economic perspective – would be a **moderate beneficial** effect, albeit temporary.

#### ***On-site activities***

- 18.7.12 The construction phase may cause some localised disruption to on-site activities, however, it is envisaged that the College will remain fully functional and access will be retained throughout; this will be enabled by effective development programming. As the secondary school, SEN school and Tech Hub are new uses, potential effects on these occupiers will only occur in the later construction phases of the scheme. Similarly, the residential components of the scheme are included in the latter stages of the development programme and as such will be unaffected by the re-development and construction of the College, new secondary school, SEN school, associated uses and sporting facilities. On this basis, the effects are considered to be **minor adverse**. The effects will also be temporary.

#### ***Mitigation Measures***

- 18.7.13 The construction employment opportunities to be created by the proposals will lead to beneficial employment effects, which do not require mitigation. However, a number of initiatives could maximise the economic benefits of the scheme felt locally, including:

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<sup>67</sup> This is an average over a ten-year series published by Scottish Government, running from 1998-2007. See <http://www.scotland.gov.uk/Topics/Statistics/Browse/Economy/Input-Output/Multipliers>

- Providing full and fair employment opportunities, training and education opportunity for local residents;
- Encouraging procurement opportunities for local businesses to source products and services locally where possible and practical; and,
- Establishing links with local schools and businesses to offer training and employment opportunities via work experience and apprentice schemes.

The College will require its contractors to take on apprentices from the local population to ensure a commitment to training local young people. Local contractors will be also used where possible.

- 18.7.14 The development programme has been formulated to minimise disruption for on-site activities and users and for local residents through a number of measures.
- 18.7.15 The first phase includes the upgrading of the existing College playing fields south of Craneford Way through the removal of existing hard standing and lining out 2 temporary grass pitches. It is envisaged that these works will be undertaken outside term time. This will allow for the release of the existing pitch adjacent to the A316 for new development and minimise disruption to the availability of sport and recreation facilities by ensuring that there are two fully operational grass pitches available. The permanent all weather and grass pitches on the College playing fields will be created in 2017/2018. Temporary changing facilities for the sports hall will be installed prior to the commencement of the autumn 2017 term.
- 18.7.16 Demolition and construction will take place on a phased basis and the RuTC will remain fully operational throughout.
- 18.7.17 The majority of construction traffic will access the site via Langhorn Drive, which will minimise potential traffic impacts on local residents<sup>68</sup>.
- 18.7.18 Works will take place during normal working hours to reduce any adverse effects on local residents.
- 18.7.19 Hoarding will also be used to segregate the active parts of the site from construction activities throughout the construction phase.
- 18.7.20 Existing pedestrian routes and footpaths crossing will be maintained at all times during construction works.
- 18.7.21 Works on Langhorn Drive will be undertaken in sections to enable access for Harlequin FC and College users. To minimise the effects on these users, works will

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<sup>68</sup> It should be noted that for the development of the College playing fields on Craneford Way East and the second phase of the residential use, there will be some minor use of Craneford Way which will be accessed and egressed from Langhorn Drive using the vehicular link with some localised traffic management.

take place during the summer period which is outside term time and during the rugby off season.

### ***Residual Effects***

- 18.7.22 As set out above, the adverse effects associated with the construction phase of the proposed development are limited. The magnitude of the **moderate beneficial** effects linked with increased construction related employment felt in LBRuT and London could be increased by encouraging the use of local labour and supply chains.
- 18.7.23 Likely minor adverse effects affecting on-site activities and occupiers during construction will be reduced or eliminated through effective and considered development programming as detailed in the previous section and by implementation of the Construction Logistics Plan and Construction Environmental Management Plan. Therefore, the residual effects to on-site activities are **negligible**.

### **Operation**

#### ***Introduction***

- 18.7.24 This section identifies and assesses the scale and nature of the main socio-economic effects arising from this development during the operational phase.

#### ***Predicted Effects – Housing Effects***

- 18.7.25 The residential development zone will accommodate enabling residential development as part of the comprehensive REEC development.
- 18.7.26 The main effect on the local housing market will be an increase of up to 180 dwellings to the current housing stock in LBRuT. It is estimated that the Borough's housing stock amounted to 183,180 dwellings<sup>69</sup> in 2013. Consequently, this increase amounts to a 0.2% gain in stock. Policy CP14 of the Council's Core Strategy sets an annual housing target of 270 dwellings per annum however; this target has been superseded by the FALP which sets an annual housing target of 315 dwelling for LBRuT. The proposed development will deliver the equivalent of 57% of this annual target, albeit profiled over two distinct phases. Phase 1 will provide 103 dwellings (57% of the total) while phase 2 will deliver 77 dwellings (44% of the total).
- 18.7.27 In terms of affordable housing, Policy CP15 of the Council's Core Strategy expects 50% of all new units will be affordable dwellings. The proposed development includes 27 affordable dwellings of varying sizes (as set out in **Table 18.2** below), this equates to approximately 15% of the scheme total. As the scheme details have yet to be finalised, the level of affordable housing that can be provided will be agreed in

<sup>69</sup> CLG Live Table 100: Dwelling Stock: Number of Dwellings by Tenure and District: England 2013

consultation with the local authority and will be subject to viability, particularly in light of the fact that the residential element of this development is required to enable the wider development of the site.

- 18.7.28 According to the South West London Strategic Housing Market Assessment (SHMA) (2012)<sup>70</sup>, in 2009 there were 6,858 households on the housing register. Provision of 27 affordable dwellings would meet 0.4% of this need.
- 18.7.29 Core Strategy Policy CP14.E requires the private sector element of any development to include at least 25% small (1-bed) units, depending on locations. The proposals include 45 one bed flats; this equates to almost 25% of the total number of dwellings, 25% of the proposed market dwellings are also one bed flats and therefore is policy compliant.
- 18.7.30 The proposed development will provide a range of dwelling types and enhance the quality of housing choice in the area. The proposed mix of units is as follows:

**Table 18.2 Proposed Mix of Residential Accommodation**

Unit Size	Percentage (%)	Market Units	Affordable Units	Total Unit Numbers
<b>One bed (Flat)</b>	25	38	7	45
<b>Two bed (Flat)</b>	45%	33	6	39
<b>Two bed (House)</b>		36	6	42
<b>Three bed (Flat)</b>	20%	7	1	8
<b>Three bed (House)</b>		24	4	28
<b>Four bed (Flat)</b>	10%	1	1	2
<b>Four bed (House)</b>		14	2	16
<b>TOTAL</b>	N/A	153	27	180

- 18.7.31 On the basis that the proposed development provides up to 180 additional dwellings, it has the potential to increase the Borough's housing stock by 0.2%, assist in meeting housing targets, provide much needed affordable housing and enhance housing mix, the effects on housing overall are considered **minor beneficial** to **moderate beneficial** in the LBRuT context.

***Predicted Effects – Population Effects***

- 18.7.32 Average household size for LBRuT is 2.31 people. By applying this average to the 180 new dwellings proposed the likely additional resident population would amount to approximately 416 people.

<sup>70</sup> South West London Strategic Housing Market Assessment Final Report, January 2012



- 18.7.33 This figure provides an approximate estimate as it does not take account of dwelling size or any other factors that impact on the number of occupiers. LBRuT makes assumptions about typical occupancy of dwellings based on unit size and location as part of its Section 106 calculator. These occupancy factors can be used to estimate the likely population effects of the proposed new dwellings and results in a population of 327 people. The calculations are set out in **Table 18.3**.

**Table 18.3 Population Estimates**

<b>Size of Dwelling</b>	<b>Number of Units</b>	<b>Occupancy Factor</b>	<b>Arising Population</b>
1 bed	45	1.39	63
2 bed	81	1.66	134
3 bed	36	2.14	77
4 bed	18	2.93	53
<b>Total</b>	<b>180</b>	<b>N/A</b>	<b>327</b>

- 18.7.34 These additional population figures assume that all residents of the new dwellings would be new residents in the area. In reality, some of the new homes are likely to be occupied by existing LBRuT residents buying first homes, residents trading up, or for affordable units, existing residents on Housing Association or Council waiting lists. It is difficult to estimate what this proportion would be new overall, and in any event existing residents relocating in this way could free up existing dwellings for occupation by other new residents, adding to the total population locally. For the purpose of assessing ‘worst case’ impacts, the higher population estimate of 416 is used to assess the likely effects herewith and all of the population increase is assumed to be additional to the local area.
- 18.7.35 An increase of 416 people represents an increase of just 0.2% of the Borough’s total population. Therefore the significance of this effect will depend on its implications for other factors, such as health and education. Such effects will not necessarily be adverse provided adequate levels of community infrastructure are provided to meet additional needs generated by the scheme. In addition the income and spending of the additional residents in the local economy will increase local Gross Value Added (GVA), with beneficial effects on the local economy.
- 18.7.36 On this basis, the effects of the population increase are considered to be of **minor beneficial** significance.

***Predicted Effects – Economic Effects***

Resident Expenditure

*First Occupation Expenditure*

- 18.7.37 Research suggests that the average homeowner spends approximately £5,000 to

make their house 'feel like home' within a year and a half of moving into a property<sup>71</sup>. This money is generally spent on furnishing and decorating a property. Applying this average level of one-off spending to the 180 market and affordable homes proposed, would suggest that the development could be expected to generate £900,000 of first occupation expenditure.

- 18.7.38 Whilst it is not possible to accurately quantify the proportion of this expenditure to be captured locally, it is considered likely that much of this will be retained within the area of impact.

*On-going Resident Expenditure*

- 18.7.39 Analysis of Output Area Classification data indicates that existing housing development in the area surrounding the application site is largely dominated by households in the 'City Living' socio-economic classification group. It is anticipated that residents of new housing proposed would broadly be occupied by the same type of household groups, with an adjustment made for occupants of the proposed affordable housing component.
- 18.7.40 The 2013 ONS Family Expenditure Survey<sup>72</sup> provides summary data on typical household spending by household socio-economic classification. This indicates average spending levels of £522.10 per week for households in the 'City Living' group. Weekly expenditure levels in London are almost 12.7% higher than the national average, taking this into consideration, it is likely that average spending levels will amount to £588.40 per week.
- 18.7.41 Based upon the data sources and assumptions outlined above, it is estimated that residents of the proposed development could be expected to generate total gross expenditure of £5.17m per annum.
- 18.7.42 It is recognised that not all residents of the proposed development will be 'new' to the area, for example some will relocate from elsewhere within LBRuT. National research provides benchmarks on the average distances moved between a head of household's present and previous home address. This can be used to estimate the proportion of the population of the proposed development which may be 'new' to the local area.
- 18.7.43 In addition, not all of the gross expenditure by residents of the proposed development at REEC will be retained within the vicinity of the development, or within the wider area of impact. Based upon a review of the Council's Retail Study<sup>73</sup>

<sup>71</sup> <http://blogs.independent.co.uk/2012/11/02/it-costs-5000-to-turn-a-house-into-a-home/>

<sup>72</sup> ONS Family Spending Survey 2013 (2014 edition)

<sup>73</sup> Richmond Retail Study, Nathaniel Lichfield & Partners 2014 Update (November 2014)

(2014 Update) it is estimated that approximately 62% of expenditure generated in LBRuT is retained within the Borough.

- 18.7.44 Taking all of the above factors into account, it is estimated that total net additional annual expenditure of £2.3m per annum will result from the new development and be retained within LBRuT. It is estimated that this additional resident spending could directly support c. 18 FTE jobs across the area of impact, including jobs in the retail, leisure, hospitality and catering sectors.
- 18.7.45 Taken together with the first occupation expenditure assessed above, it is considered that the expenditure effects associated with the development proposals are likely to be of **minor to moderate beneficial** significance in a local context.

Employment

*Direct Employment*

- 18.7.46 The level of direct employment associated with the proposed development has been derived from the intended occupiers. A breakdown of the number of jobs that will be supported by the completed building are presented in **Table 18.4** below (see also Chapter 5, **Table 5.3**). The total number of jobs can be converted to FTE, where the proportion is unknown it is assumed that two part-time jobs is equivalent to one full-time job. This results in 460 FTE jobs.

**Table 18.4 Breakdown of Employment by Proposed Floorspace**

<b>Proposed Use</b>	<b>Maximum Floorspace (GEA)(m<sup>2</sup>)</b>	<b>Number of Jobs (Total)</b>	<b>Number of Jobs (FTE)</b>
Replacement RuTC (Use Class D1)	16,000	Unknown	300
STEM Centre (Use Class D1)	6,100		
Sports Centre (Use Class D2)	3,900		
New Secondary School (Use Class D1)	7,000	90	80
New SEN School (Use Class D1)	4,000	80	60
Tech Hub (Use B1)	1,700	20	20
<b>Total</b>		<b>481</b>	<b>460</b>

*Net Additional Employment*

- 18.7.47 As set out in the baseline assessment, the intended occupiers support 379 jobs

between the subject site and other locations within LBRuT<sup>74</sup>. **Table 18.5** below shows that the proposed development will result in a net gain of 81 FTE jobs. This indicates that most of the current employment could be retained; the increase can primarily be attributed to the new secondary school, however, the number of jobs supported by Clarendon School is anticipated to decline slightly (-8 jobs).

**Table 18.5 Existing, Proposed and Net Employment**

<b>Use</b>	<b>Existing Number of Jobs (FTE)</b>	<b>Proposed Number of Jobs (FTE)</b>	<b>Net Gain/ Loss of Jobs (FTE)</b>
RuTC (Use Class D1)	291	300	+9
New Secondary School (Use Class D1)	N/A	80	+80
Clarendon School for SEN (Use Class D1)	68	60	-8
Tech Hub (Use B1)	20	20	0
<b>Total</b>	<b>379</b>	<b>460</b>	<b>+81</b>

18.7.48 Further to this net increase, the relocation of Clarendon School could allow for the development of the site on which it is located; should this development involve employment generating uses, the level of net additional employment across the Borough could be greater. The existing Haymarket Media site has been granted planning permission for redevelopment for residential uses (14/0914/FUL) therefore will no longer continue to support employment generating uses. It is understood that Haymarket is seeking to relocate to offices elsewhere in the Borough in addition to occupying the Tech Hub.

*Indirect Employment*

18.7.49 Indirect jobs will be supported by the spending on goods, supplies and services of the educational facilities and the Tech Hub based at the application site with firms in the surrounding area. The spending of wages by both employees on the site and of the local firms supplying goods will also support induced employment in local shops, services and other firms. Where detailed expenditure data is not available, these types of employment are normally estimated using employment multipliers derived from research on similar operations elsewhere, with adjustments to reflect the specific characteristics of the development, the amount of spending retained in the local area, and local economic and labour market conditions.

18.7.50 Based on the characteristics of the proposed development, its local economic context within London and its labour market, a combined employment multiplier of 1.29 is considered appropriate to estimate both indirect and induced employment for the

<sup>74</sup> It should be noted that there are 1,200 employees based at the Teddington Studio site, 20 of whom will be relocating to the proposed Tech Hub.

local area, while a multiplier of 1.44 is assumed to reflect London-wide job impacts. These multipliers are based on the Additionality Guide 4th Edition (English Partnerships). Applying this local area multiplier to the estimated 81 net additional direct FTE jobs results in a further 24 'spin-off' jobs in local services and other firms in the local area.

- 18.7.51 On this basis, the operational phase of the proposed development is estimated to support, directly and indirectly, approximately 105 FTE net additional direct and indirect jobs in total locally. Across London, a similar calculation indicates that 116 FTE net additional, direct and indirect operations related jobs would be generated. This represents just a 0.1% increase in the number of jobs in the Borough and approximately 0.9% of forecast job growth for LBRuT over the period 2011-2036<sup>75</sup>.
- 18.7.52 On this basis, it is considered that the direct and indirect employment effects of the proposed development are likely to be of **minor beneficial** significance.

### ***Predicted Effects – Education Effects***

#### Early Years / Childcare

- 18.7.53 In terms of childcare, the Council's S106 calculator suggests that the proposed development will yield 48 nursery age children<sup>76</sup>, though it is unlikely that all of the demand will come forward at the same time (particularly as the residential development is split over two phases). As described in the baseline, maintained nursery places are oversubscribed across the Borough and the lack of availability of free places can act as a barrier to access particularly for low income families; however, there is currently availability within the private, voluntary and independent (PVI) sector proximate facilities. Taking these factors into consideration, the effect on nursery places are assessed as **minor adverse**.

#### Education Facilities

- 18.7.54 As the proposed development comprises a range of educational facilities and residential units the effects on education provision in the local area is twofold.
- 18.7.55 First, the development of RuTC, the relocation of Clarendon SEN school and the development of a new secondary school will have an effect on education provision across LBRuT. Secondly, the effect of the proposed development will depend on the number of additional children of school going age generated by the residential dwellings. This section deals with these effects in turn.

<sup>75</sup> As set out in Table 1.1 'Employment projections 2011-2036 by borough' of the London Plan 2011 (as amended)

<sup>76</sup> The S106 calculator includes locational factors and relates to education provision specifically, therefore the outputs will differ from those set out in Table 5.8 which have been calculated using the GLA Shaping Neighbourhoods SPG formulae



*RuTC*

- 18.7.56 The existing RuTC building was constructed in 1977. According to the intended occupiers, the newly developed College will have the capacity for up to 3,400FTE day students as well as accommodating evening students (three evenings per week) with a smaller number on Saturday mornings. With this new development, the College will offer a wide range of courses and subjects, including A-Levels and an extensive choice of vocational qualifications. It will also offer a number of higher education courses as well as courses for adults, a GCSE pathway and a supported learning offer.
- 18.7.57 The development will enable the College to tailor its educational offer to deliver:
- A post-16 programme that will offer on-site opportunities for pupils graduating from the new secondary school to select from a wide range of options; and
  - Progression routes for Clarendon School's pupils.
- 18.7.58 In collaboration with Haymarket, Harlequins and other employers, the College is developing its curriculum to ensure that the programmes of study and qualifications available reflect the requirements of employers both locally and in the wider region in specialist areas such as: creative arts and media, digital technology, engineering and construction and sport. Haymarket and Harlequins have undertaken to provide work experience and training opportunities.

*Clarendon School*

- 18.7.59 The relocation of Clarendon School will provide a brand new, purpose built building for SEN that can provide facilities and teaching spaces specifically designed for the particular needs of the school's cohort, including those with autism. Being co-located with a mainstream secondary school and RuTC will provide opportunities for inclusion for students to and from each setting, and improved transition arrangements post-16. It will also allow access to shared facilities and improved opportunities for sharing staff expertise between settings.
- 18.7.60 The new SEN school will accommodate 115 students aged 11-16 years.

*New Secondary School*

- 18.7.61 The Department for Education has given conditional approval for the RuTC Free School Trust to establish a new school for 11 to 16 year-olds on the site of the College, opening in September 2017. The School will be co-educational, non-selective and non-faith based and admit five forms of entry (150 children) per year; equating to additional capacity for 750 pupils in total. On the basis that there is currently 9,509 secondary school places provided in schools across LBRuT, 750 additional places would increase capacity by approximately 8%.

18.7.62 As identified in the baseline assessment above, it is estimated that there will be a significant increase in demand for secondary school places across the Borough in the next 10 years, on account of increases in the demographic cohort of school going children, the increasing popularity of schools in LBRuT and the increasing numbers of pupils expected to progress through from primary level education. On this basis, the new secondary school will provide additional school places to accommodate emerging educational needs. The school will use the over-subscription criteria used for admission to RuTC’s current non-faith secondary schools.

18.7.63 The new school will link directly to the College for its Sixth Form and the curriculum offer in the two institutions will be closely aligned. This will allow for the close planning of transition from school to College and for joint curriculum development and associated training.

Arising Education Needs

18.7.64 The education effects of the development will also relate to the number of additional children of school age generated by the 180 new dwellings, the availability of spare school places in the area and general trends in schoolchildren numbers in the area. For the purposes of identifying the likely pupil yield from the development, discussions were undertaken with ‘Achieving for Children’.

18.7.65 **Table 18.6** below sets out the estimated pupil take-up arising from the proposed development (based on the residential mix set in **Table 18.2**) that has been generated using the Council’s Education and Children Services Department Pupil Take-up Model (**Appendix 18.5**). While the child yields are higher for affordable units, pupil take-up for this tenure has been reduced by 66% within the Council’s Model to account for pupils anticipated to be already registered at local schools. The proposed residential units are estimated to generate 33 additional primary school pupils and 15 secondary school pupils.

**Table 18.6 Pupil Take-up by Ownership**

	Pupil take-up		
	Primary	Secondary	Total
<b>Private</b>	29	12	41
<b>Affordable</b>	4	3	7
<b>Total</b>	<b>33</b>	<b>15</b>	<b>48</b>

18.7.66 Actual school requirements to accommodate this level of additional pupils will need to take account of any existing surplus capacity in the area and the potential for some pupils to attend private schools or to travel to schools outside the local area. These will also be maximum numbers that assume none of the children living in market housing component of the proposed development are existing local residents and that

all the pupils will want to attend a LEA school in the area of impact.

- 18.7.67 Considering primary schools in LBRuT that fall within 3km of the application site, there are 119 surplus school places equivalent to 1% capacity. The 'School Place Planning Strategy 2015-2024' indicates there is an identified need for up to three forms of entry of additional provision in the St Margarets and North Twickenham / Twickenham Riverside area. Future demand is likely to increase further as a result of new development in the locality (this point will be considered in further detail in the cumulative assessment). A new two-form entry primary school - Richmond Bridge Primary School has been approved and is currently looking to secure a suitable site. Should the school find a suitable site within this area, it will help meet demand from 2018 and could help meet the primary school education needs of the residents of the proposed development as it will be operational once the residential components of the scheme are complete. Nevertheless, taking the Borough's demand-supply position into consideration, the proposals are assessed as having a **minor adverse effect** as the pupil generation of the scheme would place additional pressure on already constrained primary school provision.
- 18.7.68 At secondary level, the proposed development of a secondary school (providing 750 pupil places) on the application site will increase secondary level capacity in the local impact area by approximately 8%. This suggests that there is sufficient secondary school capacity to accommodate arising demand associated with the proposed residential dwellings at REEC as well as wider Borough needs.
- 18.7.69 Overall, as the proposals include the provision of new secondary school facilities, as well as improved and upgraded special education needs and further education facilities, the proposals would have a **major beneficial** effect on education provision.

### ***Predicted Effects – Health Facilities***

- 18.7.70 Most of the effects on health care provision will be focused on the Richmond CCG area, although some potential demands for acute health services may arise in the neighbouring London Borough of Hounslow and Royal Borough of Kingston.
- 18.7.71 As estimated above, the gross increase in the resident population resulting from the planned 180 new dwellings will amount to some 416 people in the maximum case, although potentially less than this. At a typical provision rate of 1,600 patients per GP<sup>77</sup>, this would imply a need for 0.25 additional GPs in the local area. Similarly, a typical provision rate of 1,600 patients per dentist would indicate a need for 0.25 dentists in the area.

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<sup>77</sup> Based on NHS England 2012 figures

18.7.72 As identified in the baseline, there are 22 GPs based across 5 surgeries in Twickenham, each of these are listed as currently accepting new patients<sup>78</sup>; however, when applying a capacity rate of 1,600 patients per doctor, Oak Lane Medical Centre is the closest facility with surplus capacity. There are five dental practices in Twickenham with additional capacity.

18.7.73 Given the scale of the requirement and that GP and dental practices in the local area have surplus capacity and are accepting new patients, it is anticipated that there will be **negligible effect** on provision of health care facilities.

### ***Predicted Effects – Open-Space, Sport and Recreation***

#### Open-space and MOL

18.7.74 As set out in the baseline, Craneford Way playing fields are designated as MOL. As part of the consultation process concerns were raised by FORCE about the proposed use of the College playing fields on Craneford Way East (which is designated as MOL but is not designated open space) and the impact it will have on the character and openness of the MOL.

18.7.75 Policy DM OS2 of the Council's adopted Development Management Plan outlines that '*Metropolitan Open Land will be protected and retained in predominantly open use.*' The policy identifies '*public and private open spaces and playing fields, open recreation and sport*' among the listed appropriate uses for MOL.

18.7.76 The Policy also recognises '*there may be exceptional cases where appropriate development.... is acceptable, but only if it:*

- *Does not harm the character and openness of the metropolitan open land; and,*
- *Is linked to the functional use of the Metropolitan Open Land or supports outdoor open space uses*'.

18.7.77 The College playing fields are also part of a wider area identified in the Crane Valley Planning Guidelines as an area of focus for '*enhancing open space and associated linkages, improving sports facilities and providing for possible improvement to the College*'<sup>79</sup>. Craneford Way playing fields also forms part of the West London Green Chain.

18.7.78 It should be noted that the College playing fields have an existing sport and recreation function and is currently enclosed by a boundary wall and fencing.

18.7.79 The current level of public access to the site will be reduced particularly for casual

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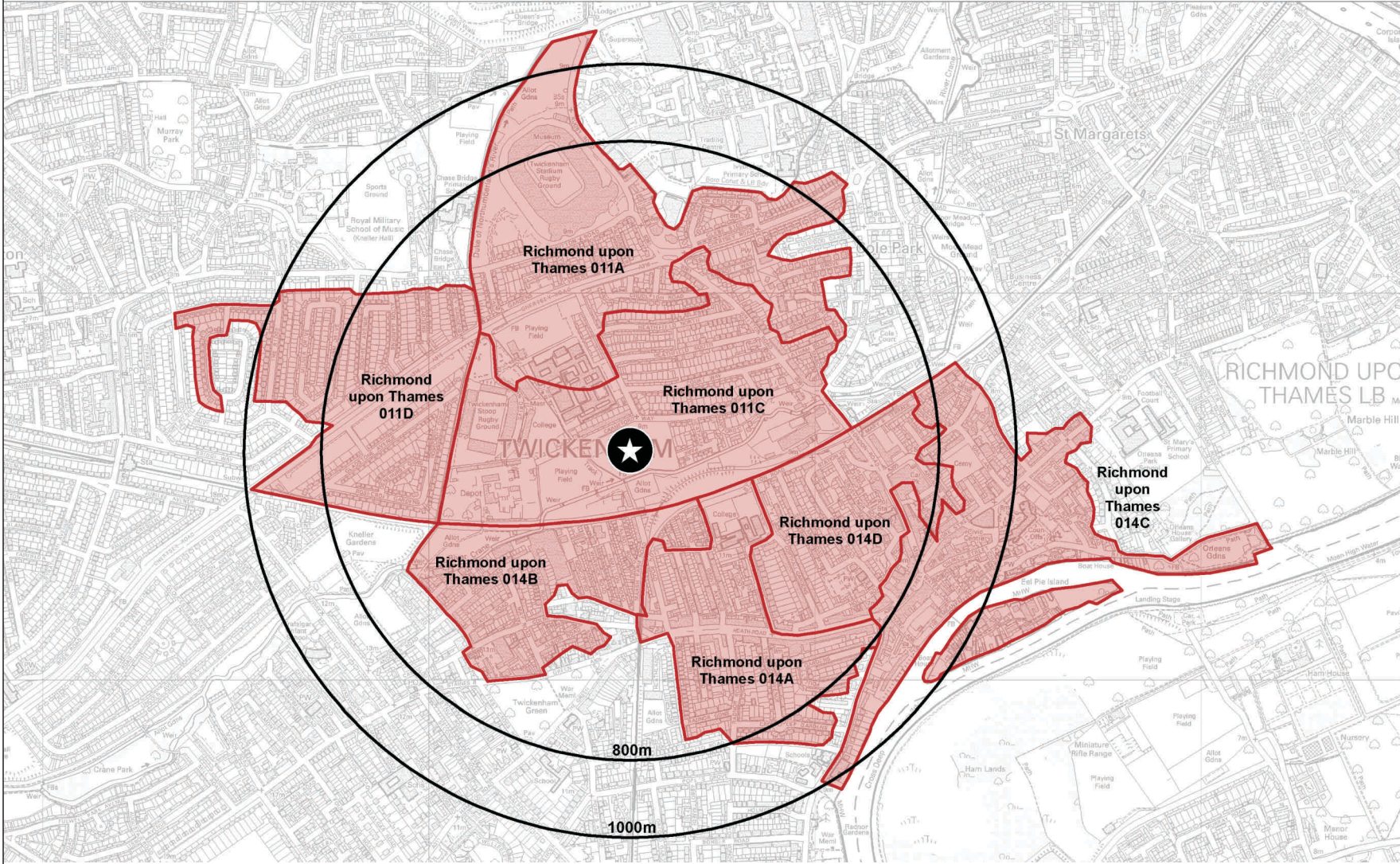
<sup>78</sup> NHS Choices (2015)

<sup>79</sup> Richmond upon Thames, *Crane Valley Planning Guidelines*, April 2005, page 3


recreational users as a result of the creation of one all-weather pitch and one grass pitch on the College playing fields however, as set out previously; this area does not constitute formal public open space. Furthermore, this needs to be considered within a wider context of open-space, sport and recreation needs of local residents and the wider Borough (discussed in further detail below), particularly as the Twickenham area has good coverage in terms of parks and gardens and natural and semi-natural greenspace (excluding Craneford Way East). The parks and gardens and greenspaces in Twickenham are generally good quality and high value also and any identified gaps are sufficiently served by other forms of open space.

- 18.7.80 The proposed uses align with the appropriate uses for MOL as set out in Policy DM OS2, and as listed above. The proposed development will significantly upgrade the quality of the playing pitch provision at Craneford Way East and as such comply with the provisions of the Crane Valley Planning Guidelines for Craneford Way playing fields also stated above.
- 18.7.81 The proposals include the removal of an area of existing hardstanding on the College playing field which will improve the characteristics of the MOL. However, it is necessary to include fencing around the pitches to accord with Sport England guidelines.
- 18.7.82 As set out in Section 18.2, FORCE has expressed concern that the proposed development would give rise to increased wear-and-tear on Craneford Way West playing field and other adjacent open spaces. The surveys undertaken by FORCE give an indication of the number of users and the range of uses that the College playing field accommodates however, it is unlikely that these surveys capture all use.
- 18.7.83 **Figure 18.4** provides an indicative catchment area for Craneford Way playing fields assuming that people are likely to walk approximately 800m to 1km (10-12 minutes walking time) to access open space. This provides an indication of the number of people likely to use the facility.





**Legend**

 Site: Richmond upon Thames College

 Lower Super Output Area (LSOA)



Note: All locations are approximate  
Contains OS data © Crown Copyright 2015

Project Title:  
Richmond Education and Enterprise Campus Development

Figure Title:  
Indicative Open Space Catchment Area Relative to the Application Site

For Information Only

Figure Number:  
Figure 18.4

Date:  
June 2015

- 18.7.84 In the region of 12,454 people live within 800m-1km of Craneford Way West<sup>80</sup>. On the basis that the proposed development of 180 dwellings is likely to give rise to an additional 416 residents, this represents an increase of 3.3% in the number of people likely to use the open space. The number of College students is not anticipated to change from the baseline position and both College and Secondary School pupils needs will be met within the REEC development. Demand from these user groups is likely to be confined to term-time and school hours. The possibility of Harlequin FC utilising the new pitches on the College playing field once constructed is seen as a logical and desirable potential option.
- 18.7.85 Chapter 8 - Transport and Chapter 15 - Ecology considers the potential increase in the number of pedestrians from REEC that are likely to use the footpaths for recreation or commuting in light of the change in access arrangements with the REEC development (restriction on egress from the east side of college) and the opportunity to use the new footpath to the station through Twickenham Rough which may alter current pedestrian routes. From paragraph 15.7.54 in Chapter 15, it is estimated that an additional 324 people (and 5 cyclists) might pass through the playing fields and use the footpath through Twickenham Rough (and the Crane Corridor) in the AM peak and 98 (and 3 cyclists) in the PM peak, thereby placing additional demand on the footpaths. To counteract the potential adverse effects arising from increased use and to ensure open space linkages to the wider River Crane Park and MOL area are maintained, the design incorporates upgrading of the current footpath between the Cranford Way playing fields, upgraded lighting and new hedgerow, woodland and perimeter planting. A new access will provided to the east of the College playing fields to allow a circular walk around the pitches and along the river bank.
- 18.7.86 The openness and character of Craneford Way West (which falls outside the application site boundary) will remain unaffected and will contribute to meeting local recreational needs. It is noted that there will be increased demand over the current baseline position arising from both this development and other proposed developments in the vicinity (the cumulative impacts will be considered in further detail in Section 18.9).
- 18.7.87 The proposed improvements are also consistent with the Council's Planning Guidelines for Crane Valley.
- 18.7.88 Based on this analysis, and the emerging findings of the Council's 'Open Space Assessment' that indicates that this part of the Borough has good coverage, quality

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<sup>80</sup> This figure is sourced from the 2011 Census Lower Super Output Areas (011C, 011A, 011D, 014B, 014A, 014D, 014C) that fall approximately within 800m-1km of Craneford West. The extent is not precise owing to the nature of the Output Area boundaries. It also takes into consideration the spatial distribution of other open space in the area.



and value greenspace the effect of the REEC development on open-space and MOL is therefore identified as **minor to moderate adverse**.

#### Sport and Recreation Facilities

18.7.89 The REEC development includes the replacement of the existing 4 court sports hall with an 8 court hall (3,900m<sup>2</sup>). The Council's 'Indoor Sports Facility Needs Assessment' indicates that this facility will help:

*'meet unmet demand for court space and can provide an opportunity to potentially accommodate minority sports such as Handball, Futsal and Volleyball, all of whom have a presence in the Borough and would like the opportunity to develop these minority activities in specialist facilities'*.

18.7.90 Chapter 5, **Table 5.4** sets out the change in provision of sports pitches between existing provision and the proposed provision based on the Illustrative Masterplan. The proposals include the loss of the grass playing fields (including adult football pitch) fronting on to the A316 (comprising 7,420m<sup>2</sup>). As set out in **Table 18.1** and **Appendix 18.3**, existing levels of community usage are low (25% capacity) and there is spare capacity to accommodate adult football teams to meet existing and future demand both across the Borough and the Twickenham area (as identified in the 'Playing Pitch Assessment 2015').

18.7.91 Furthermore, there will be some re-provision of all-weather sports surfaces within the main College site including:

- 264m<sup>2</sup> tennis court (MUGA);
- 420m<sup>2</sup> basketball court (MUGA);
- two 684.5m<sup>2</sup> football areas (MUGA);
- 684.5m<sup>2</sup> netball court; and,
- 684.5 m<sup>2</sup> MUGA within the SEN school.

18.7.92 The replacement facilities comprise all-weather sports surfaces which are suitable for use all year round and are not affected by inclement weather conditions or high-levels of usage to the same extent, particularly during winter months. The facilities will be made available for public / community use outside school operating hours, for 43.5 hours per week. One of the MUGAs will be located within the SEN school boundary thereby providing a dedicated sports facility for this special needs group and promoting an inclusive approach.

18.7.93 The proposed development includes the provision of a 3G pitch that meets International Rugby Board (IRB) 22 standards for senior level. The 'Playing Pitch Assessment' shows that there is currently only one 3G pitch located within the

Borough and a requirement for 6 (5 additional) 3G pitches (to meet FA requirements) or one (additional) full size and floodlit 3G (based on Sport England Facilities Planning Model). The Borough’s existing pitch is IRB 22 compliant but due to funding agreements it is predominantly programmed for football use. It is therefore only available in the peak period for 1-2 hours for rugby training per week.

18.7.94 Drawing on the findings of the ‘Playing Pitch Assessment’, the ‘Playing Pitch Strategy’ indicates that the ‘*opportunity for the rugby pitch at Richmond upon Thames College to be replaced by an AGP (Artificial Grass Pitches) as part of the College redevelopment and expansion should be explored. Scenario testing shows it may be surplus. Plus it could more importantly help to meet some demand for additional training facilities across LBRuT.*’ It also indicates that an AGP would help meet curriculum demand as well as community use.

18.7.95 **Table 18.7** summarises the extent of the proposed sporting facilities and community accessibility. This table should be considered alongside the ‘Community Use Statement’ and Chapter 5 - Proposed Development, Section 5.7 which provide more detailed information regarding community accessibility.

**Table 18.7 Proposed Sporting Facilities and Community Accessibility (Indicative based on Illustrative Masterplan)**

<b>Sport and Recreation Facility</b>	<b>Floorspace / Area (m<sup>2</sup>)</b>	<b>Facilities</b>	<b>Community Accessibility</b>
Sports centre	3,900	8 courts	Monday-Friday 5-10pm Weekends 9am-6pm
School site	3,399	Tennis, basketball court, two football areas, netball court, MUGA	Monday-Friday 5-10pm Weekends 9am-6pm
College playing fields	N/A	3G pitch, grass pitch for rugby, football and hockey (grass only)	Monday-Friday 5-10pm Weekends 9am-6pm

18.7.96 In their scoping opinion (as well as their pre-application consultation), Sport England reiterated the provisions of paragraph 74 of the NPPF and their ‘Playing Fields Policy: A Sporting Future for the Playing Fields of England’<sup>81</sup>. This policy identifies exceptions where the loss of playing fields is deemed acceptable including situations where:

*‘an assessment has demonstrated that there is an excess of playing fields in the catchment and the site has no special significance for sport’ (E1);*

<sup>81</sup> Sport England *A Sporting Future for the Playing Fields of England: Policy on Planning Applications for Development on Playing Fields*

*‘playing field lost would be replaced, equivalent or better in terms of quantity, quality and accessibility’ (E4); and*

*‘the proposed development is for an indoor/outdoor sports facility of sufficient benefit to sport to outweigh the detriment caused by the loss of playing field’ (E5).*

- 18.7.97 Taking all available information into consideration as discussed above, on balance, the REEC development incorporates sports facilities of sufficient benefit to sport to outweigh the detriment caused by the loss, and is identified as having a **moderate beneficial** effect.

#### Children’s Playspace

- 18.7.98 Regional and local planning policy requires public open space and children’s and young people’s play facilities to be provided alongside residential uses. Policy 3.6 of the London Plan outlines:

*‘development proposals that include housing should make provision for play and informal recreation, based on the expected child population generated by the scheme’.*

- 18.7.99 Council policy DM OS7 identifies a benchmark standard of 10m<sup>2</sup> per child (as per the Mayor’s Supplementary Planning Guidance) and states:

*‘all developments with an estimated child occupancy of ten children or more should seek to make appropriate play provision to meet the needs arising from the development’.*

- 18.7.100 The GLA Shaping Neighbourhoods SPG assumptions been used to estimate the expected child population generated by the residential element of the proposed development (based on the Illustrative Masterplan). Detailed child yield and playspace calculations are set out in **Table 5.8** and **Table 5.9** in Chapter 5; 180 dwellings are estimated to result in 71 additional children aged 0-18<sup>82</sup> which gives rise to a requirement for 708m<sup>2</sup>. The design of the proposed development (one example of which is shown in the Illustrative Masterplan (Chapter 5, **Figure 5.1**) allows for the provision of a minimum of 2,500m<sup>2</sup> of shared amenity space which will assist in meeting play and informal recreation needs.

- 18.7.101 It is anticipated that the residential component of the proposed development will be self-sufficient in terms of open space provision. The Illustrative Masterplan (Chapter 5, **Figure 5.1**) includes 5,340m<sup>2</sup> of private outdoor space comprising balconies or gardens including 3,535m<sup>2</sup> in Phase 1 and 1,805m<sup>2</sup> as part of Phase 2 (see **Table 5.7**

<sup>82</sup> Assumes 100% of affordable housing is social rented in order to text the worst case scenario (as child yields are higher than in intermediate housing).

in Chapter 5); therefore it is not expected to add additional pressure on existing facilities in the locality and is assessed as having a **neutral** effect.

### ***Predicted Effects – Community Facilities***

- 18.7.102 The estimated increase in LBRuT's population by up to 416 residents will give rise to some additional demand for existing community facilities such as libraries, places of worship, community halls, leisure facilities and emergency services. As indicated in the baseline section, there is a reasonable level of existing provision in the area at present therefore the effects will be **negligible**.

### ***Predicted Effects – Local Stakeholders***

- 18.7.103 The Council's Scoping Opinion requested that the socio-economic effects of the proposed development on a number of other groups be considered as part of this assessment. These groups include operators and users of:

- Harlequin FC;
- Nuffield Health Club;
- Twickenham Town Centre; and,
- Rugby Football Union, Twickenham(RFU).

- 18.7.104 A number of these groups have been involved in early discussions on the development proposals from the offset and discussions will be ongoing. The consequences of the development on each of these groups are considered in turn.

- 18.7.105 Harlequin FC is one of the partners of the REEC development and is on the REEC project board. Opportunities for synergies between the operators and RuTC include::

- Working with the College and schools to create a best in class sporting programme for all age groups and levels across a range of sports to encourage activity and healthy living;
- Providing access to experts from their industries including health and nutrition, strength and conditioning, leadership and management;
- Providing access to Harlequins facilities – for example restaurant standard kitchens and first class sporting facilities;
- Providing curriculum support;
- Enabling work experience and employment opportunities, for example, on match days, employment opportunities would include stewarding and kitchen and serving opportunities;
- Facilitating workshops where students are able to work with mentors on leadership, management, catering and several areas of professional sport; and,

- Inviting student groups to work on projects which Harlequins are undertaking, for example, being part of tendering processes or designing marketing collateral for supporters and the general public.
- 18.7.106 Matches are typically held at the weekend when College users are confined to part-time students and users of the sport and recreational facilities onsite. It is therefore anticipated that the effects on the users of Harlequin FC as a result of the proposed development will be neutral.
- 18.7.107 Nuffield Health Club provides a fully equipped gym and swimming pool as well as crèche and nursery facilities on-site. The facilities are aimed at personal fitness while the College sport and recreation facilities are more focused towards team sports and therefore cater for different sporting needs. The Health Club operates longer opening hours than the College facilities. The new residents may choose to enrol at the facilities and support the different offerings of the Centre. The operators were involved in early discussions on the development and discussions will be ongoing. It is anticipated that the effects for the Nuffield Health Club operators or users will be broadly neutral.
- 18.7.108 As indicated previously (see ‘Economic Effects’ section above), a portion of the income and spending of additional residents and employees as well as supplier spending will be retained in Twickenham; increased local spending will help support local shops and services and improve the vitality and viability of the town centre. Therefore, it is assessed that the effect on Twickenham town centre will be **beneficial**.
- 18.7.109 The Rugby Football Union, Twickenham is the national governing body for grassroots and elite rugby in England. The Rugby Football Union, Twickenham operates Twickenham Stadium, the home of English Rugby which is located to the north-east of the Application Site. The venue is used for sporting and entertainment events. The proximity of an IRB compliant training pitch to the Stadium would be beneficial to the operators of Twickenham Stadium. As with Harlequin FC, as match days are typically held at the weekends at a time when College usage is at its lowest, on this basis the effects are assessed as neutral.

### ***Mitigation Measures***

- 18.7.110 The housing, population, economic, education, sport and recreation and community infrastructure effects of the proposals will largely be beneficial and will not give rise to a requirement for mitigation measures. Similarly, effects on children’s play space and health facilities are assessed as neutral / negligible respectively with no mitigation required. The need for mitigation measures to address adverse effects is discussed below.

### Education

- 18.7.111 On balance, the effects on education are assessed as beneficial and major in magnitude; however, the REEC development has been assessed as giving rise to an adverse effect with respect to early years / childcare provision and primary school provision in light of constrained supply across the Borough. This could give rise to the need for financial contributions from the developer, though given the overall contribution of the scheme to education provision and meeting the Borough's wider education needs, this may not be a reasonable requirement. This should be discussed in further detail and agreed with Richmond LEA and 'Achieving for Children'.

### Open-space and MOL

- 18.7.112 The proposed development has been assessed as giving rise to an adverse effect with respect to the provision of open-space and MOL as a result of the reduced level of access to the College playing fields south of Craneford Way for recreational users and increased user levels. Following discussions with the Environment Agency (EA) and taking consultation responses into consideration, it has been agreed to make a financial contribution towards a feasibility study that the EA is planning to undertake on river restoration options in the Crane Valley, to decide how best to implement a range of measures set out in the River Basin Management Plan. These measures include restoring a more natural channel shape to the Crane (which is currently canalised in a concrete culvert) and the removal of barriers to fish migration, such as weirs. In view of the EA's plans to restore the channel, a buffer area of 8m from the top of the concrete culvert has been allowed for along the length of bank adjacent to the College playing fields, as this width would be needed to restore the river banks back to a more natural gradient.
- 18.7.113 The buffer area and the contribution towards the EA's programme of river restoration works in the Crane catchment (which the EA can use as a deposit for match funding) will assist in improving the quality of open-space and the riparian environment in the vicinity. Such improvements to the lower Crane River corridor are identified in LBRuT's Core Strategy and in the Crane Valley Planning Guidelines. In turn, river restoration works will potentially assist in providing improvements within the Crane Corridor and the West London Green Chain and therefore improve the open space and recreation provision in the area.

### ***Residual Effects***

- 18.7.114 This section considers the residual effects of the REEC development, taking into account the baseline position, likely effects of the development proposals, and proposed mitigation measures.



- 18.7.115 As relatively few mitigation measures are assessed as being necessary, the residual effects in most cases will be no different from the effects mentioned above.
- 18.7.116 Considering options for off-site provision of early years / childcare and primary school places in consultation with service providers is likely to give rise to a **neutral** effect and overall, the proposed development will have a **major beneficial** effect on education provision in LBRuT.
- 18.7.117 Following appropriate developer contributions to the EA, the minor to moderate adverse effect on open-space provision will be reduced and is assessed as **minor adverse**.
- 18.7.118 It can therefore be anticipated that the few adverse effects generated by the REEC development will be effectively minimised after mitigation measures are taken into account.

## **18.8 SUMMARY OF RESIDUAL EFFECTS**

- 18.8.1 **Table 18.8** below provides a summary of residual effects associated with the REEC development:

**Table 18.8 Summary of Residual Effects**

<b>Issue</b>	<b>Likely Significant Effect</b>	<b>Mitigation Measures</b>	<b>Likely Residual Effect</b>
<b>Site Enabling, Demolition and Construction</b>			
Construction jobs	Moderate beneficial	Contractors to take on apprentices from the local population to ensure a commitment to training local young people. Use of local contractors where possible.	Moderate beneficial
On-site activities	Minor adverse	Considered development programming	Negligible
<b>Operation</b>			
Housing	Minor to moderate Beneficial	N/A	Minor to moderate beneficial
Population	Minor beneficial	N/A	Minor beneficial
Resident expenditure	Minor to moderate beneficial	N/A	Minor to moderate beneficial
Direct and indirect employment	Minor beneficial	N/A	Minor beneficial
Education- early years/ childcare	Minor Adverse	Options for off-site provision	Neutral

Education- primary	Minor Adverse	Options for off-site provision	Neutral
Education- secondary	Major beneficial	N/A	Major beneficial
Education- SEN	Major beneficial	N/A	Major beneficial
Health facilities	Negligible	N/A	Negligible
Open-space	Minor to moderate adverse	Financial contribution towards feasibility study on river restoration	Minor adverse
Sport and recreation	Moderate beneficial	N/A	Moderate beneficial
Children playspace	Neutral	N/A	Neutral
Community facilities	Negligible	N/A	Negligible
Harlequin FC	Neutral	N/A	Neutral
Nuffield Health Club	Neutral	N/A	Neutral
<b>Issue</b>	<b>Likely Significant Effect</b>	<b>Mitigation Measures</b>	<b>Likely Residual Effect</b>
Twickenham Town Centre	Beneficial	N/A	Beneficial
Rugby Football Union, Twickenham	Neutral	N/A	Neutral

## **18.9 CUMULATIVE EFFECTS ASSESSMENT**

- 18.9.1 This section considers the likely cumulative effects that could arise from the proposed development when considered alongside other committed schemes proximate to the application site. It identifies whether effects from several developments which individually may be insignificant could, when considered together, cause significant cumulative effects requiring mitigation.
- 18.9.2 The schemes considered as part of this assessment are:
- Twickenham Railway Station (10/3465/FUL), the development proposals comprise a new station concourse, 165 residential units, 734m<sup>2</sup> of A1/A2/A3/D2 floorspace;
  - Former Twickenham Postal Sorting Office (12/3650/FUL), the development proposals comprise 110 residential units, two restaurants (300sqm x 2) and a community building (1,265 m<sup>2</sup>); and,
  - Land Known as Twickenham Rough – Open Land West of Twickenham Sorting Office Site (13/1147/FUL) provision of public amenity land and a 3m wide footpath/cycleway.
- 18.9.3 The assessment is based on the best available information and draws on the socio-economic assessment included in the Environmental Statements that accompanied the development applications where applicable.

### Construction

- 18.9.4 In terms of the construction phase, it is recognised that adverse cumulative socio-economic effects could arise if all of the proposed developments were to all come forward at once, as the availability of labour could be constrained. However, it is considered unlikely that this situation would arise. The proposed developments are at different stages of the development process, have varying lead-in times and are expected to come forward on a phased basis. Application reference 12/3650/FUL is currently under construction and is likely to be complete prior to the commencement of the REEC development. As such, the demand for labour and specific skills is likely to be distributed over a number of years as individual schemes are built out. Furthermore, national construction firms often use their own, permanent workforce on projects supported by local contractors, meaning that availability of local labour would not necessarily act as a constraint to delivery of projects. Therefore, it is considered that the magnitude of any adverse effects at the construction phase will be **negligible** and therefore does not require mitigation.

### Operation

- 18.9.5 In combination, these proposed developments alongside the development of REEC provide 455 new residential dwellings, of which 66 units will be affordable. The arising population could amount to approximately 892 people<sup>83</sup>, which will lead to an increase in demand for education, healthcare, open-space, sport and recreation and community facilities. It is considered that the cumulative effect of the developments on the existing provision of this range of community infrastructure in the local area is not significantly different from that identified within Section 18.7. Even with an increase in demand, it is assessed that the cumulative increase in demand arising from the various developments could still be mostly accommodated by the current and proposed provision in the local area with the exception of early years/childcare and primary education provision where the scale of the adverse effects increases in magnitude to **moderate adverse** and open space where cumulative effects are assessed as **minor adverse**. Additional details of the above assessments are provided below.
- 18.9.6 The REEC development would increase education provision (increasing the Borough's secondary school capacity by approximately 8% as well as providing new SEN and Further Education facilities) and provide additional sport and recreation facilities (all weather sports pitches and new sports hall facilities) which could help meet the needs of the cumulative additional population, as well as the needs of the wider population.

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<sup>83</sup> Based on the population yields set out in the respective socio-economic assessments

- 18.9.7 The redevelopment of Twickenham Railway Station will accommodate and benefit the residents of the cumulative schemes as well as the wider Twickenham population. The A1/A2/A3/D2 flexible floorspace could assist in meeting the community infrastructure needs of the arising population depending on the final use.
- 18.9.8 The Former Twickenham Postal Sorting Office development includes a community building which could also assist in meeting the arising community infrastructure needs.
- 18.9.9 The Twickenham Rough footpath / cycleway proposals will provide public amenity and recreation space for new and existing residents of Twickenham and LBRuT. The footpath will improve access to wider MOL in the area and help meet the Council's policy objective set out in the Crane Valley Planning Guidelines. The increase in pedestrian flows is considered in further detail in Chapter 15 - Ecology.
- 18.9.10 In terms of open-space, it is not apparent from the socio-economic assessment what quantum of private open space is being provided as part of the Twickenham Station re-development. In terms of public open space, it is assessed that there is sufficient capacity provided by a number of parks and open spaces - Grimwood Road open space, Moormead Park and Recreation Ground and Playground, Holly Road Garden of Rest and Playground, Craneford Way Recreation Ground and Playground to meet residents' needs and therefore developer contributions towards park upgrades was proposed.
- 18.9.11 The socio-economic assessment of the Former Royal Mail Sorting Office indicates that new dwellings will have private gardens and access to a plaza area to meet open-space and playspace needs. Part of this site that was designated as MOL was transferred to LBRuT (Twickenham Rough) to facilitate the provision of a footpath. On this basis, it is not anticipated that this development will place additional pressure on Craneford Way West and alongside the REEC proposals will increase MOL linkages in the area.
- 18.9.12 In order to assess a 'worst case scenario', though it is unlikely, it is possible to assume that all new residents will use Craneford Way West open space. Taking the existing baseline position set out in Section 18.5, 892 additional residents equates to a 7.2% increase in the population likely to use the facility. Therefore the cumulative effect is assessed as being **minor adverse**.
- 18.9.13 Combined, the schemes have a child yield of 87 nursery age children and 68 primary school age children albeit profiled over a number of years. None of the proposed developments under consideration provide additional facilities to increase provision.
- 18.9.14 As set out, maintained early years / childcare and primary education provision in

LBRuT are constrained. In terms of early years / childcare, the shortfall in maintained nursery is currently being met by Private, Voluntary and Independent (PVI) provision (which accounts for almost 75% of all provision across the Borough). The Council is currently considering the available options to extend current provision. In the absence of new provision prior to the completion of these developments, the cumulative effect is assessed as being **moderate adverse**.

- 18.9.15 The Council's 'School Place Planning Strategy 2015-2024' takes account of each of these cumulative schemes when identifying likely demand. As indicated previously, the Strategy suggests that there is a need for three new forms of entry in this part of the Borough. It is possible that Richmond Bridge Primary – an approved two-form entry primary school could meet a portion of this need (the school is currently seeking an appropriate site). This additional provision would thereby reduce the cumulative effects of these schemes. Nevertheless, as predicted need still outstrips supply, the cumulative effects in terms of primary education are assessed as **moderate adverse**.

### **Mitigation**

- 18.9.16 The Twickenham Railway Station development undertakes to make a development contribution towards the upgrading existing open space and the Former Twickenham Postal Sorting Office transferred MOL land to open up access to wider open space. While the cumulative effects are assessed as minor adverse, on the basis that the Council's 'Draft Open Space Assessment' does not identify a shortfall in provision, it is not assessed that any further mitigation is required.
- 18.9.17 The Twickenham Railway Station development and Former Twickenham Postal Sorting Office development proposals undertake to make a S106 contribution towards increasing primary school provision though it is not clear whether similar contributions towards increasing early years / childcare provision have been agreed.
- 18.9.18 The proposed contributions (or pooled S106 contributions) from the other schemes will assist in delivering additional capacity to meet this need and alleviate constraints. As outlined, on the basis that the REEC development is helping to meet the wider education needs for the residents of these schemes as well as Twickenham and other LBRuT residents, mitigation is not assessed as being required though this will be agreed in consultation with Richmond LEA and 'Achieving for Children'.

### **Residual Effects**

- 18.9.19 Following mitigation measures made through S106 contributions, adverse cumulative effects of the development would be effectively minimised and are assessed as negligible.

**18.10 SUMMARY AND CONCLUSION**

- 18.10.1 The proposed REEC development will deliver a replacement RuTC, a new secondary school, a SEN school, upgraded sporting facilities, a Tech Hub and residential dwellings including 15% affordable units.
- 18.10.2 The development will have a beneficial effect on the local economy by creating new construction jobs during the development phase and new operational jobs once the scheme has been fully built-out. The proposed development represents significant new capital investment within the local area, and will help to raise the overall levels of economic activity and expenditure within the local economy.
- 18.10.3 Alongside these economic effects, the proposed development will meet local housing need, improve further education provision, increase the Borough's secondary school capacity by approximately 8%, provide high quality SEN facilities, provide an upgraded playing pitch as well as all-weather sport facilities (3G) to meet identified need. The proposals will also meet a longstanding objective of the Council to redevelop the site and improve Twickenham as a location as well as meeting the objectives of the Crane Valley Planning Guidelines.
- 18.10.4 The development of the site will place more demand on existing education provision, health facilities, open-space and community facilities and services and this could lead to some adverse effects that require mitigating. On balance, overall, from a socio-economic perspective, the proposed development is assessed as having a moderate beneficial effect.

## 19 SUMMARY OF RESIDUAL EFFECTS

### 19.1 INTRODUCTION

- 19.1.1 This chapter summarises the residual environment effects of the REEC development.
- 19.1.2 Residual effects are those that remain following the incorporation of any identified mitigation measures. While the REEC design and its construction methods have been developed to avoid environmental impacts, incorporating mitigation by design (see Chapter 4 – Alternatives and Design Evolution) and through a series of construction management plans (see Chapter 6 – Demolition and Construction), some additional mitigation measures have been identified through the EIA process.
- 19.1.3 The significance of residual construction and operation effects set out below has been presented in accordance with the methodology used by each technical assessment. Only those environmental impacts that result in significant residual effects are summarised in the sections below; summary tables of all the impacts assessed are given in each of the individual topic chapters (Chapters 8-18). Negligible effects are not considered significant.

### 19.2 SUMMARY OF RESIDUAL EFFECTS

#### Site Enabling, Demolition and Construction

- 19.2.1 **Table 19.1** provides a summary of the significant residual effects of the construction of the REEC development, comprising all stages of the enabling works, demolition and construction.

**Table 19.1 Summary of Residual Construction Effects**

Effect	Significance
<b>TRANSPORT</b>	
<i>No significant residual effects after mitigation</i>	
<b>NOISE AND VIBRATION</b>	
Construction noise on sensitive receptors external to the Site	Negligible to moderate adverse
Construction noise on internal receptors	Negligible to moderate adverse
<b>AIR QUALITY</b>	
Vehicle emissions (NO <sub>2</sub> concentrations)	Moderate adverse
<b>GROUND CONDITIONS</b>	

<b>Effect</b>	<b>Significance</b>
Soil chemical contamination health impacts on construction workers, occupiers and residents in residential development zone	Minor to moderate beneficial (with remediation)
<b>WASTE</b>	
<i>No significant effects identified, no mitigation required.</i>	
<b>WATER RESOURCES and FLOOD RISK</b>	
<i>No significant residual effects after mitigation</i>	
<b>DAYLIGHT SUNLIGHT AND OVERSHADOWING</b>	
<i>No significant effects identified, no mitigation required.</i>	
<b>ECOLOGY</b>	
Loss of scattered trees	Minor beneficial (with additional planting)
Loss of bat foraging habitat	Minor adverse
Habitat enhancement	Minor beneficial
<b>TOWNSCAPE AND VISUAL AMENITY</b>	
Townscape effects on Langhorn Drive Local Character Area and Chertsey Road South Local Character Area	Minor adverse
Visual effects on users of Marsh Farm Lane and the College playing fields south of Craneford Way	Minor adverse
Visual effects on users of the footpath/cycleway along the A316 and public open space to the west and south-west of the Site	Minor adverse
Visual effects on pedestrians within adjoining residential areas and Rosecroft Gardens Conservation Area	Minor adverse
Visual effects on residents with an immediate outlook over the REEC development	Minor adverse
<b>CULTURAL HERITAGE</b>	
Rosecroft Gardens Conservation Area	Minor adverse
<b>SOCIO-ECONOMICS</b>	
Construction jobs	Moderate beneficial



## Operation

19.2.2 **Table 19.2** provides a summary of the significant residual effects arising once the REEC is operational.

**Table 19.2 Summary of Residual Operational Effects**

Effect	Significance
<b>TRANSPORT</b>	
Pedestrian severance	Minor beneficial
<b>NOISE AND VIBRATION</b>	
Noise from sports pitches on College playing fields	Negligible to minor adverse
<b>AIR QUALITY</b>	
Vehicle emissions (NO <sub>2</sub> concentrations)	Moderate adverse (opening year) to negligible (after 15 years)
<b>GROUND CONDITIONS</b>	
<i>No significant effects identified, no mitigation required.</i>	
<b>WASTE</b>	
<i>No significant effects identified, no mitigation required.</i>	
<b>WATER RESOURCES and FLOOD RISK</b>	
<i>No significant residual effects after mitigation.</i>	
<b>DAYLIGHT SUNLIGHT AND OVERSHADOWING</b>	
Winter sunlight levels at two neighbouring properties on Egerton Road	Minor adverse
<b>ECOLOGY</b>	
<i>No significant residual effects after mitigation.</i>	
<b>TOWNSCAPE AND VISUAL AMENITY</b>	
Townscape effects on Marsh Farm Lane and open space to west of Site	Moderate beneficial
Townscape effects on Langhorn Drive Local Character Area and Whitton and Heathfield Borough Character Area	Moderate beneficial
Townscape effects on Crane Corridor, Chertsey Road North and South Local Character Areas	Minor beneficial
Visual amenity of users of Marsh Farm Lane and open space to west/south west of Site	Minor beneficial (opening year) to moderate beneficial (after 15 years)

<b>Effect</b>	<b>Significance</b>
Visual amenity of residents with an immediate outlook over the REEC development from habitable rooms used during the daytime (north side of Craneford Way)	Minor beneficial
Visual amenity of residents with an outlook over the REEC development from habitable rooms used during the daytime (Challenge Court and west side of Egerton Road )	Minor adverse (opening year) to minor adverse – winter only (after 15 years)
Visual amenity of users of the footpath and cycleway along the A316	Moderate beneficial
Pedestrians within adjoining residential areas	Minor beneficial
Pedestrians within residential areas to the north	Minor beneficial (opening year) to minor beneficial – winter only (after 15 years)
<b>CULTURAL HERITAGE</b>	
<i>No significant effects identified, no mitigation required.</i>	
<b>SOCIO-ECONOMICS</b>	
Housing	Minor to moderate beneficial
Population	Minor beneficial
Resident expenditure	Minor to moderate beneficial
Direct and indirect employment	Minor beneficial
Education – secondary and SEN	Major beneficial
Open-space and MOL	Minor adverse
Sport and recreation	Moderate beneficial
Twickenham Town Centre	Beneficial

### **19.3 SUMMARY OF CUMULATIVE EFFECTS**

- 19.3.1 Cumulative effects were identified in the EIA on air quality, early years / childcare and primary education provision and on open space.
- 19.3.2 Increased traffic from REEC development and the cumulative developments considered is predicted to result in a small increase in levels of air pollutants at locations close to the A316. However, overall future air quality is predicted to improve significantly as the number of low-emission vehicles on the road increases, and the pollutant levels following the completion of development are predicted to be lower than existing levels.

- 19.3.3 The cumulative increase in demand for early years / childcare and primary education provision from the residential elements of the REEC development and the cumulative developments will increase the significance of the effects from minor neutral to moderate adverse. Demand on open space may increase, despite provision of amenity space within the new developments, but is considered to remain a minor adverse effect.