

## HUDU Rapid Health Impact Assessment Matrix

The assessment matrix is designed to rapidly assess the likely health impacts of development plans and proposals, including planning frameworks and masterplans for large areas, regeneration and estate renewal programmes and outline and detailed planning applications. It should be used prospectively at the earliest possible stage during plan preparation, or prior to the submission of a planning application to inform the design, layout and composition of a development proposal.

The matrix does not identify all issues related to health and wellbeing, but focuses on the built environment and issues directly or indirectly influenced by planning decisions. It is generic and should be localised for specific use. Not all the issues or assessment criteria may be relevant and the user is encouraged to prioritise specific actions which focus on key impacts.

The assessment matrix identifies eleven topics or broad determinants. Under each topic, Section 2 of the tool identifies examples of planning issues which are likely to influence health and wellbeing and the section also provides supporting information and references.

Health impacts may be short-term or temporary, related to construction or longer-term, related to the operation and maintenance of a development and may particularly affect vulnerable or priority groups of the population. Where an impact is identified, actions should be recommended to mitigate a negative impact or enhance or secure a positive impact.

Name of assessor / organisation: Anne Fairhead (Cascade Consulting) .....

Name of project (plan or proposal): Richmond Education and Enterprise Campus (REEC) Development.....

Planning reference (if applicable): Ref 4278503 v1 .....

Location of project: Egerton Road, Twickenham TW2 7SJ.....

Date of assessment: 28/07/15.....

## 1 Housing quality and design

Assessment criteria	Relevant?	Details/evidence	Potential health impact?	Recommended mitigation or enhancement actions
Does the proposal seek to meet all 16 design criteria of the Lifetime Homes Standard or meet Building Regulation requirement M4 (2)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	The proposals are at outline stage and as such full details are not yet available. However, as set out in the Design Code, the residential development should be designed and built according to the Lifetime Homes Standards (or from October 2015 Approved Document M) in order to provide a high quality environment.	<input checked="" type="checkbox"/> Positive <input type="checkbox"/> Negative <input type="checkbox"/> Neutral <input type="checkbox"/> Uncertain	Detailed design to adhere to guidelines set out in the Design Code.
Does the proposal address the housing needs of older people, ie extra care housing, sheltered housing, lifetime homes and wheelchair accessible homes?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	At outline design stage specific details relating to the specification of homes are not available; however the Design Code sets out that 10% of dwellings should be provided as wheelchair accessible or should be easily adaptable for residents who are wheelchair users.	<input checked="" type="checkbox"/> Positive <input type="checkbox"/> Negative <input type="checkbox"/> Neutral <input type="checkbox"/> Uncertain	Further consideration of the needs of older people at detailed design stage.
Does the proposal include homes that can be adapted to support independent living for older and disabled people?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	The proposed development does not provide care housing or sheltered housing, however the Design Code identifies that the design should exceed the minimum requirements of the Building regulations part M and Part K to ensure that all people, regardless of age, sex or ability can use and enjoy the built environment.	<input type="checkbox"/> Positive <input type="checkbox"/> Negative <input type="checkbox"/> Neutral <input checked="" type="checkbox"/> Uncertain	Consideration of measures to support the independent living of older people and disabled people should be given at the detailed design stage.
Does the proposal promote good design through layout and orientation, meeting internal space standards?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	At outline design stage specific details relating to the specification of homes have not been defined, however, as set out in the Design Code, the residential development should be designed and built	<input checked="" type="checkbox"/> Positive <input type="checkbox"/> Negative <input type="checkbox"/> Neutral <input type="checkbox"/> Uncertain	In accordance with the London Housing Design Guide, layout, orientation and internal space standards will be considered during the detailed design stage.

Assessment criteria	Relevant?	Details/evidence	Potential health impact?	Recommended mitigation or enhancement actions
		in accordance with the London Housing Design Guide, including the internal space standards.		
Does the proposal include a range of housing types and sizes, including affordable housing responding to local housing needs?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	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, this equates to approximately 15% of the scheme total. At outline stage the scheme details have yet to be finalised, however the exact level of affordable housing that can be provided will be agreed in 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.	<input checked="" type="checkbox"/> Positive <input type="checkbox"/> Negative <input type="checkbox"/> Neutral <input type="checkbox"/> Uncertain	Further consideration of affordable housing at detailed design stage.
Does the proposal contain homes that are highly energy efficient (eg a high SAP rating)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	The proposals are at outline stage and as such full details are not yet available. However, as set out in the Design Code, the strategic approach to the design of the development is to minimise the demand for energy and optimise the use of low energy solutions. The residential development should achieve or exceed the sustainability standards identified in the Mayor of London's Housing Strategy. The Energy Statement sets out the energy efficiency measures to be incorporated into the detailed design, which follows the Lean,	<input checked="" type="checkbox"/> Positive <input type="checkbox"/> Negative <input type="checkbox"/> Neutral <input type="checkbox"/> Uncertain	No further action required.

Assessment criteria	Relevant?	Details/evidence	Potential health impact?	Recommended mitigation or enhancement actions
		Clean, Green energy hierarchy set out in Policy 5.2 of the London Plan 2015.		

## 2 Access to healthcare services and other social infrastructure

Assessment criteria	Relevant?	Details/evidence	Potential health impact?	Recommended mitigation or enhancement actions
Does the proposal retain or re-provide existing social infrastructure?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<p>The redevelopment of Richmond upon Thames College, the relocation of Clarendon Special Educational Needs school and the development of a new secondary school should have a positive effect on education provision across the Borough. In addition, the REEC partnership is committed to providing community use for a wide range of facilities and activities, including the College/School restaurant and catering; Hair and Beauty salons; School halls and drama spaces; College fitness gym; College/ School sports halls; School Multi-Use Games Area.</p>	<input checked="" type="checkbox"/> Positive <input type="checkbox"/> Negative <input type="checkbox"/> Neutral <input type="checkbox"/> Uncertain	No further action required.
Does the proposal assess the impact on healthcare services?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<p>Most of the effects on health care provision will be focused on the Richmond clinical commissioning group (CCG) area, although some potential demands for acute health services may arise in the neighbouring London Borough of Hounslow and Royal Borough of Kingston.</p> <p>The gross increase in the resident population resulting from the planned 180 new dwellings is estimated to 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 (NHS England 2012 figures), 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</p>	<input type="checkbox"/> Positive <input type="checkbox"/> Negative <input checked="" type="checkbox"/> Neutral <input type="checkbox"/> Uncertain	No further action required.

Assessment criteria	Relevant?	Details/evidence	Potential health impact?	Recommended mitigation or enhancement actions
		<p>area.</p> <p>There are 22 GPs based across 5 surgeries in Twickenham, each of these are listed as currently accepting new patients (NHS Choices 2015); 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.</p> <p>Given the scale of the requirement and that GP and dental practices in the local area have surplus capacity and are accepting new patients, the Environmental Statement (ES) which accompanies the outline planning application concludes that it is anticipated that there will be negligible effect on provision of health care facilities.</p>		
Does the proposal include the provision, or replacement of a healthcare facility and does the facility meet NHS requirements?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Due to the scale of the proposed development, it will not provide a health facility.	<input type="checkbox"/> Positive <input type="checkbox"/> Negative <input checked="" type="checkbox"/> Neutral <input type="checkbox"/> Uncertain	No further action required.
Does the proposal assess the capacity, location and accessibility of other social infrastructure, eg schools, social care and community facilities?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	The proposed development will improve further education provision through the upgrading of Richmond upon Thames College, increase the Borough's secondary school capacity by approximately 8%, and provide high quality Special Educational Needs facilities.	<input checked="" type="checkbox"/> Positive <input type="checkbox"/> Negative <input type="checkbox"/> Neutral <input type="checkbox"/> Uncertain	No further action required.

Assessment criteria	Relevant?	Details/evidence	Potential health impact?	Recommended mitigation or enhancement actions
		<p>In terms of childcare, the Council's S106 calculator suggests that the proposed development will yield 48 nursery age children, 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). Maintained nursery places are oversubscribed across the Borough 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 in the ES which accompanies the outline planning application.</p> <p>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 ES concludes that the proposals would have a major beneficial effect on education provision.</p> <p>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. The ES which accompanies the outline planning application concludes there is a reasonable level of existing provision in the area at present and therefore the effects will be negligible.</p>		

Assessment criteria	Relevant?	Details/evidence	Potential health impact?	Recommended mitigation or enhancement actions
Does the proposal explore opportunities for shared community use and co-location of services?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	The REEC partnership is committed to providing community use for a wide range of facilities and activities, including the College/School restaurant and catering; Hair and Beauty salons; School halls and drama spaces; College fitness gym; College/ School sports halls; School Multi-Use Games Area and sports pitches.	<input checked="" type="checkbox"/> Positive <input type="checkbox"/> Negative <input type="checkbox"/> Neutral <input type="checkbox"/> Uncertain	No further action required.
Does the proposal contribute to meeting primary, secondary and post 19 education needs?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	The proposed development will not contribute directly to meeting primary education needs but will improve further education provision through the upgrading of Richmond upon Thames College, increase the Borough's secondary school capacity by approximately 8%, and provide high quality Special Educational Needs facilities.	<input checked="" type="checkbox"/> Positive <input type="checkbox"/> Negative <input type="checkbox"/> Neutral <input type="checkbox"/> Uncertain	No further action required.

### 3 Access to open space and nature

Assessment criteria	Relevant?	Details/evidence	Potential health impact?	Recommended mitigation or enhancement actions
Does the proposal retain and enhance existing open and natural spaces?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<p>Craneford Way playing fields are designated as Metropolitan open land (MOL). During the consultation process for the development concerns were raised about the proposed use of the College playing fields south of Craneford Way (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. The College playing fields have an existing sport and recreation function and are currently enclosed by a boundary wall and fencing. The current level of public access to the site will be reduced particularly for casual recreational users as a result of the creation of one all-weather pitch and one grass pitch on the College playing fields however, 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, particularly as the Twickenham area has good coverage in terms of parks and gardens and natural and semi-natural greenspace (excluding the College playing fields).</p> <p>Overall the proposed development has been assessed in the ES which accompanies the outline planning application 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</p>	<input type="checkbox"/> Positive <input checked="" type="checkbox"/> Negative <input type="checkbox"/> Neutral <input type="checkbox"/> Uncertain	<p>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.</p> <p>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</p>

Assessment criteria	Relevant?	Details/evidence	Potential health impact?	Recommended mitigation or enhancement actions
		and increased user levels.		within the Crane Corridor and the West London Green Chain and therefore improve the open space and recreation provision in the area.
In areas of deficiency, does the proposal provide new open or natural space, or improve access to existing spaces?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<p>The proposals are at outline stage and as such full details are not yet available. However, as set out in the Design and Access Statement, the development proposes to increase the total amount of open space on the site. The illustrative scheme layout provides 3960m<sup>2</sup> of additional open space compared to that existing.</p> <p>In addition, 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 be provided to the east of the College playing fields to allow a circular walk around the pitches and along the river bank.</p>	<input checked="" type="checkbox"/> Positive <input type="checkbox"/> Negative <input type="checkbox"/> Neutral <input type="checkbox"/> Uncertain	As above.
Does the proposal provide a range of play spaces for children and young people?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<p>The development proposals incorporate a range of shared and private playspaces. The College, schools and residential development all incorporate garden space. As set out in the Design Code the ground floor residential units should be provided with private gardens and the upper level dwellings should be provided with roof terrace or balconies. The proposals incorporate a College fitness gym; College/ School sports halls; School Multi-Use Games</p>	<input checked="" type="checkbox"/> Positive <input type="checkbox"/> Negative <input type="checkbox"/> Neutral <input type="checkbox"/> Uncertain	No further action required.

Assessment criteria	Relevant?	Details/evidence	Potential health impact?	Recommended mitigation or enhancement actions
		Area and sports pitches which provide extensive opportunities for play. In addition the School play areas should accommodate a wide range of activities including outdoor dining; social areas; hard and soft play areas; formal sports areas/ Multi-Use Games Area; outdoor learning spaces; and landscape and natural areas. The residential development includes large shared communal areas to provide residents with access to places to green and open spaces within easy reach of their homes. The shared amenity spaces are located within the secure area of the residential site in order to ensure it is easily accessible from the majority of dwellings (in particular those without private gardens). The space is intended to incorporate a range of spaces, including children's and young people's play and informal recreational areas.		
Does the proposal provide links between open and natural spaces and the public realm?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	The proposals include the upgrading of Marsh Farm Lane which should become a significantly more important part of the public realm. Once upgraded this will provide a wide, attractive and safe route which will improve access to open spaces along the River Crane and, by linking with other footpaths/cycleways such as that being created through Twickenham Rough by LBRuT, to Twickenham town centre and the wider area.	<input checked="" type="checkbox"/> Positive <input type="checkbox"/> Negative <input type="checkbox"/> Neutral <input type="checkbox"/> Uncertain	No further action required.
Are the open and natural spaces welcoming and safe and accessible for all?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	The proposals are at outline stage and as such full details are not yet available. However, as set out in the Design Code the open spaces should	<input checked="" type="checkbox"/> Positive <input type="checkbox"/> Negative <input type="checkbox"/> Neutral	Detailed design to adhere to guidelines set out in the Design Code.

Assessment criteria	Relevant?	Details/evidence	Potential health impact?	Recommended mitigation or enhancement actions
		be safe and attractive environments that are designed to be easily supervised, and where possible designed to encourage passive surveillance. They should be appropriately lit, with clear lines of sight, and where possible, be provided with clear boundaries that do not create areas that are concealed. In addition the Design Code sets out that the external spaces should be designed for inclusion and accessibility.	<input type="checkbox"/> Uncertain	
Does the proposal set out how new open space will be managed and maintained?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	The proposals include a range of types of open space, associated with the College, Schools and the residential element of the development. The details of the management of these spaces will be defined at the detailed design stage.	<input type="checkbox"/> Positive <input type="checkbox"/> Negative <input checked="" type="checkbox"/> Neutral <input type="checkbox"/> Uncertain	Suitable maintenance arrangements will be defined at the detailed design stage.

#### 4 Air quality, noise and neighbourhood amenity

Assessment criteria	Relevant?	Details/evidence	Potential health impact?	Recommended mitigation or enhancement actions
Does the proposal minimise construction impacts such as dust, noise, vibration and odours?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	The ES which accompanies the outline planning application includes an Outline Construction Environmental Management Plan which sets out the best practice measures which will be implemented in order to minimise construction impacts. The ES concluded that there are likely to be some adverse residual noise and air quality effects from construction following mitigation, but these will be temporary.	<input type="checkbox"/> Positive <input checked="" type="checkbox"/> Negative <input type="checkbox"/> Neutral <input type="checkbox"/> Uncertain	<p>Suitable mitigation measures such as acoustic hoarding, dust suppression etc. to be employed as necessary once detailed construction details are available.</p> <p>The proposed development should be registered with the Considerate Constructors Scheme. Best practice construction techniques to be used as set out in the Outline Construction</p>

Assessment criteria	Relevant?	Details/evidence	Potential health impact?	Recommended mitigation or enhancement actions
				Environmental Management Plan.
Does the proposal minimise air pollution caused by traffic and energy facilities?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<p>The ES which accompanies the outline planning application concluded the overall residual effect on air quality (specifically nitrogen dioxide levels) of additional traffic associated with the development is predicted to be minor adverse. The effects are predicted to reduce to negligible by 15 post completion due to anticipated improvements in vehicle emissions technologies and the gradual renewal of the vehicle fleet.</p> <p>The following measures are proposed as part of the scheme design to reduce the operational traffic associated with the development:</p> <ul style="list-style-type: none"> <li>• An upgrade to Marsh Farm Lane within the Site boundary to enable a new 3m shared footway / cycleway to be provided between London Road and Marsh Farm Lane routed on the southern side of the River Crane. This will open up a new convenient route between the site and Twickenham Station for pupils, staff, visitors and residents and encourage walking and cycling.</li> <li>• Car parking for the educational estate has been reduced to encourage sustainable forms of transport</li> <li>• Secure cycle parking provision provided to local standards and showers with changing facilities for staff and employees will help to encourage cycling as an alternative to short car, bus and rail trips.</li> </ul>	<input type="checkbox"/> Positive <input checked="" type="checkbox"/> Negative <input type="checkbox"/> Neutral <input type="checkbox"/> Uncertain	Promotion of the measures contained within the Framework Travel Plan (submitted as part of the outline planning application) to encourage environmentally sustainable travel choices in order to reduce the traffic generated by the completed development.

Assessment criteria	Relevant?	Details/evidence	Potential health impact?	Recommended mitigation or enhancement actions
Does the proposal minimise noise pollution caused by traffic and commercial uses?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	The ES which accompanies the outline planning application concluded that noise pollution from additional traffic associated with the proposed development would not cause a significant impact.	<input type="checkbox"/> Positive <input type="checkbox"/> Negative <input checked="" type="checkbox"/> Neutral <input type="checkbox"/> Uncertain	No further action required.

## 5 Accessibility and active travel

Assessment criteria	Relevant?	Details/evidence	Potential health impact?	Recommended mitigation or enhancement actions
Does the proposal prioritise and encourage walking (such as through shared spaces?)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<p>As set out in the Transport Assessment accompanying the outline planning application, the proposals include the improvement of a number of walking and cycling routes.</p> <p>The Marsh Farm Lane cycle/footpath and the Twickenham Rough cycle/footpath (being provided by others) will provide a high quality desirable pedestrian and cycle route to Twickenham Station, the bus stops near it and to Twickenham town centre for users of the Replacement College, Tech Hub and Residential site, and the wider community. The route will help to reduce the pedestrian and cycle demand on local residential roads such as Court Way and Craneford Way.</p> <p>The proposed new A316 Chertsey Road / Langhorn Drive signal controlled junction will provide at grade pedestrian crossings over the A316 and Langhorn Drive. The crossings will have a dedicated pedestrian phase within the signal timing. This will improve the desire line to bus stops on Whitton Road and London Underground stations to the north of the REEC development site. It will also improve the pedestrian crossing capacity over the A316, easing any pressure on the nearby footbridge and the pedestrian crossing near Chudleigh Road.</p> <p>The upgrade (by Transport for London) of the existing shared cycle/footway on both sides of the</p>	<input checked="" type="checkbox"/> Positive <input type="checkbox"/> Negative <input type="checkbox"/> Neutral <input type="checkbox"/> Uncertain	No further action required.

Assessment criteria	Relevant?	Details/evidence	Potential health impact?	Recommended mitigation or enhancement actions
		<p>A316 Chertsey Road between its junction with Langhorn Drive and the Whitton Road will improve access for pedestrians and cyclists from the REEC development and the wider community. The improvements form part of a larger cross borough segregated cycle route which will ultimately provide a 12 mile cycle route between Hanworth in Hounslow through to Hyde Park Corner, via Cycle Superhighway 9.</p> <p>The improvements to the pedestrian and cycle infrastructure brought about by the proposed development and third parties will help to encourage users of the REEC development and the wider community to use more sustainable modes of travel to access the site and local area.</p>		
Does the proposal prioritise and encourage cycling (for example by providing secure cycle parking, showers and cycle lanes)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<p>As above.</p> <p>The proposed development will provide secure cycle parking with changing rooms and shower facilities which will meet the London Plan (2015) standards.</p>	<input checked="" type="checkbox"/> Positive <input type="checkbox"/> Negative <input type="checkbox"/> Neutral <input type="checkbox"/> Uncertain	Implement measures to encourage cycling which are set out in the Framework Travel Plan.
Does the proposal connect public realm and internal routes to local and strategic cycle and walking networks?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	The upgrade of the existing shared cycle/footway on both sides of the A316 Chertsey Road between its junction with Langhorn Drive and the Whitton Road will improve access for pedestrians and cyclists from the REEC development and the wider community. The improvements form part of a larger cross borough segregated cycle route which will ultimately provide a 12 mile cycle route between Hanworth in Hounslow through to Hyde Park	<input checked="" type="checkbox"/> Positive <input type="checkbox"/> Negative <input type="checkbox"/> Neutral <input type="checkbox"/> Uncertain	No further action required.

Assessment criteria	Relevant?	Details/evidence	Potential health impact?	Recommended mitigation or enhancement actions
		Corner, via Cycle Superhighway 9.		
Does the proposal include traffic management and calming measures to help reduce and minimise road injuries?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<p>The portion of Marsh Farm Lane passing the College building will include a roadway (the remainder will provide access for pedestrians and cyclists only). This stretch of Marsh Farm Lane will incorporate chicanes to calm traffic.</p> <p>Three collisions were recorded on roads which form the site boundary, one slight collision on Egerton Road and two serious collisions on Chertsey Road. A review of the collisions indicates that the contributory factors included aggressive driving, pedestrian failure to judge vehicle path and speed and poor observation of both the pedestrian and the driver. Therefore, the design of the local road network is not deemed to be the cause of the recorded collisions and no further measures are proposed.</p>	<input checked="" type="checkbox"/> Positive <input type="checkbox"/> Negative <input type="checkbox"/> Neutral <input type="checkbox"/> Uncertain	No further action required.
Is the proposal well connected to public transport, local services and facilities?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	In order to determine the current accessibility of the site by public transport at a local level, a public transport accessibility level (PTAL) assessment has been undertaken. This assessment is widely used by the London Boroughs and is supported by Transport for London. The PTAL value for the site is ranges from 2 to 1b which shows that it has a poor to very poor level of public transport accessibility, with the eastern side of the site being	<input checked="" type="checkbox"/> Positive <input type="checkbox"/> Negative <input type="checkbox"/> Neutral <input type="checkbox"/> Uncertain	No further action required.

Assessment criteria	Relevant?	Details/evidence	Potential health impact?	Recommended mitigation or enhancement actions
		<p>2 and the western side being 1b.</p> <p>Discussions are ongoing with TfL to develop bus service frequency improvements to accommodate the additional demand on the bus network resulting from the development which equates to 3 to 4 additional bus loads in the AM peak hour period.</p> <p>Improvements being brought forward by the GLA funded upgrade of Twickenham Station and improvements further afield to London Waterloo Station will improve travel for users of the REEC site and local residents traveling in and out of London. Also, the extra 24,000 extra peak-time seats being brought forward by South West Trains will mitigate the additional demand generated by the REEC development. Improvements to rail infrastructure, capacity and rolling stock will be completed by the time the REEC development is operational in 2019.</p> <p>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. There are a number of places of worship and religious centres. 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 away. The nearest community centre to the REEC development 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</p>		

Assessment criteria	Relevant?	Details/evidence	Potential health impact?	Recommended mitigation or enhancement actions
		site. There are six post offices within 1.5km of the REEC 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.		
Does the proposal seek to reduce car use by reducing car parking provision, supported by the controlled parking zones, car clubs and travel plans measures?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<p>A Framework Travel Plan setting out potential measures and targets for the site has been prepared and submitted as part of the outline planning application. The measures in the Travel Plan will encourage the use of more sustainable modes of transport to reduce the reliance on private car use.</p> <p>There will be no on-site allocated parking spaces for students. The proposed provision for visitor and staff parking, which meets LBRuT maximum parking standards, is lower than what is currently in place relative to staff levels.</p> <p>Further details will be determined at detailed design stage.</p>	<input checked="" type="checkbox"/> Positive <input type="checkbox"/> Negative <input type="checkbox"/> Neutral <input type="checkbox"/> Uncertain	The measures included in the Framework Travel Plan should be further developed at detailed design stage, including the potential use of car clubs and measures to reduce the need to travel.
Does the proposal allow people with mobility problems or a disability to access buildings and places?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	The proposals are at outline stage and as such full details are not yet available. However, as set out in the Design Code the street and path network should be designed for inclusion and accessibility. All main access routes, including streets, paths, ramps and entrances should be fully negotiable, including by people with limited mobility. Where existing barriers to mobility exist, where practical, the development should seek to amend adjoining external areas to improve accessibility. Tactile	<input checked="" type="checkbox"/> Positive <input type="checkbox"/> Negative <input type="checkbox"/> Neutral <input type="checkbox"/> Uncertain	Detailed design should seek to maximise the accessibility of the site.

Assessment criteria	Relevant?	Details/evidence	Potential health impact?	Recommended mitigation or enhancement actions
		<p>paving should be designed to maximise clarity. Appropriate areas should be provided for accessible setting down points and accessible car parking places for blue-badge holders.</p>		

## 6 Crime reduction and community safety

Assessment criteria	Relevant?	Details/evidence	Potential health impact?	Recommended mitigation or enhancement actions
Does the proposal incorporate elements to help design out crime?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<p>The proposals are at outline stage and as such full details are not yet available. However, as set out in the Design Code the development should be safe and secure, and should 'design out' crime. Streets and paths should be designed to ensure safety of pedestrian, cyclists and vehicle users. Safety should be promoted through the creation of readily supervised and secure places that encourage ownership and use by those they are intended for and that are easily supervised, well managed and maintained. The use of defensive furniture and structures should be minimised.</p>	<input checked="" type="checkbox"/> Positive <input type="checkbox"/> Negative <input type="checkbox"/> Neutral <input type="checkbox"/> Uncertain	Detailed design should seek to maximise the safety and security of the site.
Does the proposal incorporate design techniques to help people feel secure and avoid creating 'gated communities'?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<p>The proposals are at outline stage and as such full details are not yet available. However, as set out in the Design Code the use of active frontages where possible should allow passers-by to see activities in the buildings, promoting engagement with the public realm and increasing safety and security.</p> <p>The street and path networks should be designed to be easily supervised, and where possible designed to encourage passive surveillance. They should be well-lit, with clear lines of site, and where possible should not be surrounded by high vegetation or outbuildings.</p> <p>The Design and Access Statement specifies that pedestrian and cycle access to and across the residential site should be designed to integrate the new residential areas with the existing</p>	<input checked="" type="checkbox"/> Positive <input type="checkbox"/> Negative <input type="checkbox"/> Neutral <input type="checkbox"/> Uncertain	As above.

Assessment criteria	Relevant?	Details/evidence	Potential health impact?	Recommended mitigation or enhancement actions
		neighbourhood.		
Does the proposal include attractive, multi-use public spaces and buildings?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<p>The proposals are at outline stage and as such full details are not yet available. However, as set out in the Design Code the built fabric of the development should be of a high standard and building design should ensure a safe, attractive and successful public realm. The public realm and buildings should be appropriate to their context and intended use, and should provide a meaningful contribution to the location within which they are situated. The development should be vibrant and characterful.</p>	<input checked="" type="checkbox"/> Positive <input type="checkbox"/> Negative <input type="checkbox"/> Neutral <input type="checkbox"/> Uncertain	The detailed design should seek to maximise the opportunities to provide a safe and attractive public realm.
Has engagement and consultation been carried out with the local community?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<p>Consultation has been undertaken throughout the development of the project with both technical and public consultation being completed.</p> <p>Public consultation has involved meetings, drop-ins and a question and answer session for local residents. A booklet outlining the high level vision for the proposals was distributed to 9000 households. A flyer and consultation display was available in the Civic Centre. Articles in the local newspaper and the RuTC and LBRuT council websites provided further information.</p> <p>A Local Community Forum was established and has been consulted from the early stages of the design development, with 10 meetings held since June 2014. The organisations involved in the Forum are:</p> <ul style="list-style-type: none"> <li>• Dean Estate Residents Association</li> </ul>	<input checked="" type="checkbox"/> Positive <input type="checkbox"/> Negative <input type="checkbox"/> Neutral <input type="checkbox"/> Uncertain	Consultation to continue throughout the detailed design stage to ensure residents, local interest groups, social infrastructure providers and business continue to have access to information about the scheme and to have opportunities to comment on the proposals as they are refined.

Assessment criteria	Relevant?	Details/evidence	Potential health impact?	Recommended mitigation or enhancement actions
		<ul style="list-style-type: none"> <li>• Friends of the River Crane Environment (FORCE)</li> <li>• Heatham Alliance</li> <li>• Court Way Residents Associations</li> <li>• Heatham Residents Association</li> <li>• Heathfield South Neighbourhood Watch</li> <li>• Chudleigh Road Neighbourhood Watch</li> <li>• Court Way Residents</li> </ul> <p>Local ward members are also invited to attend the LCF meetings.</p>		

## 7 Access to healthy food

Assessment criteria	Relevant?	Details/evidence	Potential health impact?	Recommended mitigation or enhancement actions
Does the proposal facilitate the supply of local food, ie allotments, community farms and farmers' markets?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	The proposed development is for educational and residential use, and as such does not include allotments, community farms or farmers' markets within the proposed development. However the schools will have areas for gardening.	<input type="checkbox"/> Positive <input type="checkbox"/> Negative <input checked="" type="checkbox"/> Neutral <input type="checkbox"/> Uncertain	The use of local food in the catering activities of the College could be investigated at detailed design stage. Consideration could be given to the incorporation of allotments in the residential development as part of the communal open space provision.
Is there a range of retail uses, including food stores and smaller affordable shops for social enterprises?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<p>The proposed development is for educational and residential use, and as such does not include retail uses for social enterprises within the proposed development.</p> <p>The College incorporates catering training as part of its curriculum and provides public access to a training restaurant. In addition the College and Schools will provide canteen facilities for students and staff.</p>	<input type="checkbox"/> Positive <input type="checkbox"/> Negative <input checked="" type="checkbox"/> Neutral <input type="checkbox"/> Uncertain	No further action required.
Does the proposal avoid contributing towards an over-concentration of hot food takeaways in the local area?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	<p>As above.</p> <p>The proposed development is for educational and residential use, and as such does not include hot food takeaways within the proposed development.</p>	<input type="checkbox"/> Positive <input type="checkbox"/> Negative <input checked="" type="checkbox"/> Neutral <input type="checkbox"/> Uncertain	No further action required.

## 8 Access to work and training

Assessment criteria	Relevant?	Details/evidence	Potential health impact?	Recommended mitigation or enhancement actions
Does the proposal provide access to local employment and training opportunities, including temporary construction and permanent 'end-use' jobs?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<p>Construction employment is estimated on the basis of a construction cost for the built development. Employment could be expected to equate to some 112 FTE jobs in total over the 4.5 year build period. 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.</p> <p>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.</p> <p>Further details are provided in the socioeconomic assessment included in the ES.</p> <p>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.</p> <p>The proposed development involves the relocation of some existing employment from elsewhere in LBRuT to the REEC site. The proposed development will result in a net gain of 81 FTE jobs with the increase primarily attributed to the new secondary school. The Tech for the Haymarket</p>	<input checked="" type="checkbox"/> Positive <input type="checkbox"/> Negative <input type="checkbox"/> Neutral <input type="checkbox"/> Uncertain	To be reviewed once the detailed design is available.

Assessment criteria	Relevant?	Details/evidence	Potential health impact?	Recommended mitigation or enhancement actions
		<p>Media group includes provision for up to 20 staff to be on site.</p> <p>The College provides education and training to 16-18 year olds and adults from across Richmond, London, Surrey and Berkshire. The college offers a wide range of academic and technical vocational qualifications (entry level through to level 4) including a wide range of A Levels and a raft of technical vocational qualifications, higher education courses and Apprenticeships.</p>		
Does the proposal provide childcare facilities?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	The development does not include childcare provision.	<input type="checkbox"/> Positive <input type="checkbox"/> Negative <input checked="" type="checkbox"/> Neutral <input type="checkbox"/> Uncertain	No further action required.
Does the proposal include managed and affordable workspace for local businesses?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	The proposals incorporate a 'Tech Hub' on the College site which will enable students at the College to access, through the Haymarket Skills Academy, industry standard technology and work with established professionals who will be on hand to provide 'master classes' and help shape curriculum content. In addition, the Tech Hub proposals incorporate start-up 'incubator spaces'.	<input checked="" type="checkbox"/> Positive <input type="checkbox"/> Negative <input type="checkbox"/> Neutral <input type="checkbox"/> Uncertain	No further action required.
Does the proposal include opportunities for work for local people via local procurement arrangements?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	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.	<input checked="" type="checkbox"/> Positive <input type="checkbox"/> Negative <input type="checkbox"/> Neutral <input type="checkbox"/> Uncertain	To be reviewed once the detailed design is available.

## 9 Social cohesion and lifetime neighbourhoods

Assessment criteria	Relevant?	Details/evidence	Potential health impact?	Recommended mitigation or enhancement actions
Does the proposal connect with existing communities, ie layout and movement which avoids physical barriers and severance and land uses and spaces which encourage social interaction?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<p>As outlined in the Design and Access Statement, the proposed development has high potential for encouraging social interaction via use of the sport facilities and other recreational facilities. The College playing fields south of Craneford Way will be upgraded for use by the college, schools and wider community. The College and Schools will share the sports centre and pitches, and the two schools will share the MUGA within the main site. Community use of the school MUGA will be provided out of main school hours of use; after 5.30pm to closing time (governed by planning regulations) and on Saturdays and Sundays. In addition use of the MUGA will be provided when the school is closed during holiday periods. The playing fields will be upgraded to allow for one all-weather sports pitch and one grass pitch, with an unfenced grass warm up area.</p> <p>A new gateway will be provided for pedestrians to access the eastern end of the College playing fields on Craneford Way, making a circular walk around the new pitches. The existing footpath across the College playing fields, the wall between Craneford Way East and West playing fields, and the existing bridge over the River Crane will be retained, but will be upgraded / refurbished as part of the REEC development. In addition there will be improved pedestrian access via the upgraded shared footpath and cycleway along Marsh Farm Lane, which runs from Craneford Way in the south to the</p>	<input checked="" type="checkbox"/> Positive <input type="checkbox"/> Negative <input type="checkbox"/> Neutral <input type="checkbox"/> Uncertain	No further action required.

Assessment criteria	Relevant?	Details/evidence	Potential health impact?	Recommended mitigation or enhancement actions
		<p>A316 in the north. This will form a new pedestrian route to the College.</p> <p>The REEC partnership is committed to providing community use for a wide range of facilities and activities, including the College/School restaurant and catering; Hair and Beauty salons; School halls and drama spaces; College fitness gym; College/ School sports halls; School Multi-Use Games Area.</p>		
Does the proposal include a mix of uses and a range of community facilities?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<p>The REEC partnership is committed to providing community use for a wide range of facilities and activities, including use of the:</p> <ul style="list-style-type: none"> <li>• College sports hall – Community use of the sports hall will be provided out of main College hours of use; after 5.30pm to closing time (governed by planning regulations) and on Saturdays and Sundays. In addition, use of the sports hall will be provided during College holiday periods when it is closed.</li> <li>• College restaurant and catering – The principle of development is to provide the College with industry standard, real work environments. The College restaurant will be open to the community for hire and for dining both during College standard hours and through evening classes.</li> <li>• College fitness gym - Within the main building (separate to the sports building) the College will provide access to a fitness gym both during College daytime operational hours, evening and weekends.</li> <li>• Hair and Beauty – the College wish to actively encourage the community to book</li> </ul>	<input checked="" type="checkbox"/> Positive <input type="checkbox"/> Negative <input type="checkbox"/> Neutral <input type="checkbox"/> Uncertain	No further action required.

Assessment criteria	Relevant?	Details/evidence	Potential health impact?	Recommended mitigation or enhancement actions
		<p>treatments within the hair and beauty salons during daytime and evening opening.</p> <ul style="list-style-type: none"> <li>• Sports Pitches – the College is committed to the provision of bookable use of the sports pitches in the evenings (in the summer, due to the absence of floodlighting) and at weekends and will commit to a community use agreement.</li> <li>• School sports hall – Community use of the sports hall will be provided out of main school hours of use; after 5.30pm to closing time (governed by planning regulations) and on Saturdays and Sundays. In addition use of the sports hall will be provided when the school is closed during holiday periods.</li> <li>• School dining room and catering – the school dining space will be open to the community for hire outside normal school hours (governed by planning regulations).</li> <li>• School halls and drama spaces – the school halls and drama spaces will be open to the community for hire outside normal school hours (governed by planning regulations).</li> <li>• School Multi-Use Games Area – Community use of the school MUGA will be provided out of main school hours of use; after 5.30pm to closing time (governed by planning regulations) and on Saturdays and Sundays. In addition use of the MUGA will be provided when the school is closed during holiday periods.</li> </ul>		
Does the proposal provide opportunities for the voluntary and community	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	The proposed development is for educational and residential use, and as such does not include explicit provision for the voluntary and community sectors within the proposed development. However	<input type="checkbox"/> Positive <input type="checkbox"/> Negative <input checked="" type="checkbox"/> Neutral	No further action required.

Assessment criteria	Relevant?	Details/evidence	Potential health impact?	Recommended mitigation or enhancement actions
sectors?		the access available to a range of facilities (see above) may improve opportunities for these sectors.	<input type="checkbox"/> Uncertain	
Does the proposal address the six key components of Lifetime Neighbourhoods?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<p>The outline design currently incorporates many of the aspects of the Lifetime Neighbourhoods:</p> <ul style="list-style-type: none"> <li>• <u>Resident Empowerment</u> - social initiatives will be considered and confirmed at the detailed design stage.</li> <li>• <u>Access</u> - the proposed development will provide a well connected residential development promoting walking, cycling and public transport as preferential means of travel.</li> <li>• <u>Services and Amenity</u> - the proposed development will be situated within easy walking distance of a post office, school, GP surgery, recreation ground, public house, and bus stop with easy access to the Twickenham town centre.</li> <li>• <u>Built and Natural Environments</u> - the proposed development will provide safe and secure open green space on the doorsteps of residents, while links will be provided to the nearby open space to facilitate easy access to the local natural environments.</li> <li>• <u>Social Networks/well-being</u> - social initiatives will be considered and confirmed at the</li> </ul>	<input checked="" type="checkbox"/> Positive <input type="checkbox"/> Negative <input type="checkbox"/> Neutral <input type="checkbox"/> Uncertain	Ensure the Lifetime Neighbourhood principles are incorporated into the detailed design process.

Assessment criteria	Relevant?	Details/evidence	Potential health impact?	Recommended mitigation or enhancement actions
		<p>detailed design stage.</p> <ul style="list-style-type: none"> <li>• <u>Housing</u> - the proposed development will provide a range of home sizes and specifications, ranging from two to four bedroom homes, to meet local needs. 15% of the development will provide affordable homes.</li> </ul>		

## 10 Minimising the use of resources

Assessment criteria	Relevant?	Details/evidence	Potential health impact?	Recommended mitigation or enhancement actions
Does the proposal make best use of existing land?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<p>Because this is a redevelopment project on an existing site, the proposal is concerned only with development on existing land. The proposal does make the best use of the land by improving the education and recreation value of the site, carefully planning car parking facilities, improving access, planning development around potential for using sustainable resources and implementing habitat redevelopment.</p>	<input checked="" type="checkbox"/> Positive <input type="checkbox"/> Negative <input type="checkbox"/> Neutral <input type="checkbox"/> Uncertain	No further action required.
Does the proposal encourage recycling (including building materials)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<p>As set out in the Design and Access Statement, sustainable construction methods and energy efficiency will be adopted at the detailed design stage. This will promote a high standard of build and construction for the development, in accordance with Best Practice Standards.</p> <p>During construction, buildings waste will be dealt with appropriately in order to maximise recycling opportunities. Segregation of waste streams will maximise opportunities for reuse and recycling. For example; of the total demolition waste arisings of 45,279 m<sup>3</sup>, up to approximately 5,329 m<sup>3</sup> (including brick and concrete from external walls and internal partitions) would be recycled, crushed, graded and re-used as a sub-base for new foundations. These demolition materials would be stockpiled on-site prior to re-use during the site enabling works.</p>	<input checked="" type="checkbox"/> Positive <input type="checkbox"/> Negative <input type="checkbox"/> Neutral <input type="checkbox"/> Uncertain	To be reviewed once the detailed design is available.

Assessment criteria	Relevant?	Details/evidence	Potential health impact?	Recommended mitigation or enhancement actions
		<p>The contractor aims to meet the following targets:</p> <ul style="list-style-type: none"> <li>• Divert a total of 96% of waste from landfill through reuse and recycling of demolition waste, clean excavated 'waste' and construction waste; and</li> <li>• Reuse and recycle at least 80% of mixed demolition and construction waste.</li> </ul>		
Does the proposal incorporate sustainable design and construction techniques?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	As mentioned above, during construction sustainable methods will be adopted to maximise reuse and recycling of buildings waste. For information on sustainable design, see the following section on Climate Change.	<input checked="" type="checkbox"/> Positive <input type="checkbox"/> Negative <input type="checkbox"/> Neutral <input type="checkbox"/> Uncertain	Due to the complexity of successfully installing and/or using sustainable technology or techniques, this should be reviewed again once the detailed design is available.

## 11 Climate change

Assessment criteria	Relevant?	Details/evidence	Potential health impact?	Recommended mitigation or enhancement actions
Does the proposal incorporate renewable energy?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<p>The following technologies were evaluated for incorporation on the site:</p> <ul style="list-style-type: none"> <li>• Wind turbines</li> <li>• Biomass boilers</li> <li>• Biomass combined heat and power</li> <li>• Photovoltaics (PV)</li> <li>• Solar water heating</li> <li>• Ground source heat pumps</li> <li>• Air source heat pumps.</li> </ul> <p>Due to the predicted site wind speed being below recommended limit, wind turbines are not deemed appropriate as a renewable energy technology for the development.</p> <p>Due to the plants space requirements to locate the biomass, filter, fuel store and associated equipment and delivery, biomass heating or power is not a suitable option for this development.</p> <p>PV modules are suitable for the development.</p> <p>Solar hot water heating is suitable for the development.</p> <p>Ground source heating and cooling is not a suitable renewables options for this development.</p> <p>Air source heat pumps are deemed suitable for use</p>	<input checked="" type="checkbox"/> Positive <input type="checkbox"/> Negative <input type="checkbox"/> Neutral <input type="checkbox"/> Uncertain	To be reviewed once detailed design is available.

Assessment criteria	Relevant?	Details/evidence	Potential health impact?	Recommended mitigation or enhancement actions
		<p>due to low carbon.</p> <p>The feasibility of these of renewable technologies has been assessed in the context of the London Plan. The analysis has concluded that the provision of an extensive series of energy conservation, energy efficiency measures and use of air source heat pumps and solar thermal, could be the most effective method of achieving the required reduction in carbon dioxide emissions.</p> <p>Further details can be found in the Energy Statement submitted as part of the outline planning application.</p>		
Does the proposal ensure that buildings and public spaces are designed to respond to winter and summer temperatures, i.e. ventilation, shading and landscaping.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<p>The proposed development has been designed according to the principles of Lean Engineering and Clean Engineering. The development will aim to meet the requirements of Approved Document L of the Building Regulations (Part L 2013) energy performance target, by implementing a combination of passive building design features and active building services systems using the 'cooling hierarchy' which aims to manage the amount of heat entering the building in summer through orientation, shading, insulation and design, then utilising mechanical ventilation, and only using active cooling systems if necessary.</p> <p>Further details can be found in the Energy Statement submitted as part of the outline planning application.</p>	<input checked="" type="checkbox"/> Positive <input type="checkbox"/> Negative <input type="checkbox"/> Neutral <input type="checkbox"/> Uncertain	To be reviewed once detailed design is available.

Assessment criteria	Relevant?	Details/evidence	Potential health impact?	Recommended mitigation or enhancement actions
Does the proposal maintain or enhance biodiversity?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<p>The ES which accompanies the outline planning application includes an assessment of ecological effects resulting from the construction and operation of the development.</p> <p>Demolition, site clearance and construction have potential to cause direct impacts to non-designated habitats within the site boundary. These include habitat loss, habitat damage, and habitat fragmentation. The development's landscaping proposals will include measures to replace lost habitat features such as trees. Habitat damage on site will be reduced by protecting any retained features such as trees and their roots.</p> <p>With mitigation, the effects of habitat fragmentation and deterioration on designated sites and all habitats other than scattered trees during site enabling, demolition and construction works are all considered to be negligible. The impact of the habitat enhancement, including planting of approximately 300 trees on the Site, is considered likely to provide a minor beneficial effect on the scattered tree habitat.</p> <p>Because there is likely to be some disturbance to wildlife on site during construction, measures are in place to enhance the available nesting and roosting habitat for key species groups such as birds, bats and invertebrates through extensive tree planting, artificial roosting structures and dead-wood habitat features. These measures will result in a minor beneficial effect on these species.</p>	<input type="checkbox"/> Positive <input type="checkbox"/> Negative <input checked="" type="checkbox"/> Neutral <input type="checkbox"/> Uncertain	<p>The ecology assessment provide in the ES concluded mainly negligible effects on biodiversity, therefore with the proposed mitigation measures noted, no further action in required.</p>

Assessment criteria	Relevant?	Details/evidence	Potential health impact?	Recommended mitigation or enhancement actions
Does the proposal incorporate sustainable urban drainage techniques?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<p>Redevelopment of the existing site will create more open space and permeable areas. Based on the Illustrative Masterplan, the increase in permeable ground cover is 19.5% and reduction of impermeable groundcover is 23% compared to the existing site.</p> <p>The site is currently drained by a series of soakaways. These existing soakaways are sufficient to manage the current site runoff. However they cannot be retained as the proposed building footprints overlap with the locations of the soakaways. A new drainage strategy and a conceptual SuDS design is therefore proposed, based on the use of permeable paving, green roofs and soakaways. It is likely that the performance of new SuDS features and water quality will improve over the current development where the drainage effectiveness of the existing soakaways is assumed to be depreciated due to siltation and aging. Green roofs will be used where possible to reduce the volume and rate of runoff so that downstream SuDS and other drainage infrastructure can be reduced in size.</p> <p>Rainwater harvesting may be considered at detailed design stage for landscape irrigation.</p> <p>Further details can be found in the Outline Sustainable Urban Drainage Strategy which accompanies the outline planning application.</p>	<input checked="" type="checkbox"/> Positive <input type="checkbox"/> Negative <input type="checkbox"/> Neutral <input type="checkbox"/> Uncertain	To be reviewed once detailed design is available.