East Area Planning Committee 8th January 2013

Application Number: 12/02072/OUT

Decision Due by: 6th December 2012

Proposal: Demolition of existing buildings on application site. Outline planning application (fixing details of access) for the erection of 48,000sqm of class D1 research floorspace and ancillary facilities on 2 to 5 storeys over 5 building plots as an extension to University of Oxford Old Road Campus. Provision of 459 car parking spaces, cycle parking, hard and soft landscaping and boundary treatment

Site Address: University of Oxford Old Road Campus, **Appendix 1.**

Ward: Churchill Ward

Agent: Turnberry Consulting **Applicant:** University of Oxford

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Recommendation: Committee is recommended to support the proposals in principle but defer the planning application in order to draw up an accompanying legal agreement and to delegate to officers the issuing of the Notice of Planning Permission on its completion.

Reasons for Approval

1 The proposed development would represent an efficient use of land allocated for medical research in the emerging Sites and Housing Plan. The buildings would be limited in their height, scale and massing to form an appropriate extension to the University's existing medical research campus. The relationship with residential properties in the locality would be acceptable as would the relationship to Old Road and the Churchill Hospital site. Appropriate landscaping would be secured to mitigate against any loss of tree coverage with ecology, hydrology and groundwater conditions protected.

2 For the detailed reasons set out in this report it is concluded that the public comments received in relation to the development do not amount individually or collectively to a reason for refusal of planning permission, and that the relevant bodies have been consulted and the issues raised properly addressed.

3 The Council considers that the proposal accords with the policies of the development plan as summarised below. It has taken into consideration all

other material matters, including matters raised in response to consultation and publicity. Any material harm that the development would otherwise give rise to can be offset by the conditions imposed.

Conditions

1 Time limits for commencement
2 Reserved matters
3 Development in accordance with perameters plan
4 Restrict building heights
5 Materials
6 Landscape and public realm
7 Arboricultural method statement.
8 Landscape and public realm
9 Landscape management
10 Boundary treatments
11 Car parking strategy - maximum numbers
12 Pedestrian and cycle access points
13 Cycle parking
14 Travel plan
15 Construction travel plan
16 Construction Environmental Management plan
17 Sustainability strategy / natural resource impact analysis.
18 Foul and surface water drainage
19 Sustainable drainage
20 Flood risk assessment
21 Ground contamination
22 Vibration and piling
23 Petrol / oil interceptors
24 Noise attenuation
25 Internal and external lighting
26 Cooking smells
27 Repeat ecological surveys
28 Removal of vegetation outside bird breeding season
29 Habitat creation
30 Photographic record of Boundary Brook House.
31 Archaeological watching brief
32 Public art strategy and provision

Legal Agreement:

Financial contribution towards transport infrastructure improvements of £1,169,231 calculated on the following basis:

- Controlled parking zones: £250,000.
- Additional capacity at Park and Ride: £505,000.
- Bus service improvements: £128,000.
- Cycling and walking facilities: £286,231.

Principal Planning Policies:

Oxford Local Plan 2001-2016
CP1 - Development Proposals
CP6 - Efficient Use of Land & Density
CP8 - Design Development to Relate to its Context
CP9 - Creating Successful New Places
CP10 - Siting Development to Meet Functional Needs
CP11 - Landscape Design
CP13 - Accessibility
CP14 - Public Art
CP17 - Recycled Materials
CP18 - Natural Resource Impact Analysis
CP21 - Noise
CP22 - Contaminated Land
CP23 - Air Quality Management Areas
TR1 - Transport Assessment
TR2 - Travel Plans
TR3 - Car Parking Standards
TR4 - Pedestrian & Cycle Facilities
TR5 - Pedestrian & Cycle Routes
TR7 - Bus Services & Bus Priority
TR9 - Park & Ride
TR12 - Private Non-Residential Parking
TR13 - Controlled Parking Zones
TR14 - Servicing Arrangements
NE6 - Oxford's Watercourses
NE11 - Land Drainage & River Engineering Works
NE12 - Groundwater Flow
NE13 - Water Quality
NE14 - Water and Sewerage Infrastructure
NE15 - Loss of Trees and Hedgerows
NE16 - Protected Trees
NE20 - Wildlife Corridors
NE21 - Species Protection
NE22 - Independent Assessment
NE23 - Habitat Creation in New Developments
HE2 - Archaeology
HE6 - Buildings of Local Interest
EC1 - Sustainable Employment
DS36 - Institute of Health Sciences, Old Rd - Medical Research
DS64 - Park Hospital Site - Oxford Brookes University Use

Core Strategy
CS2 - Previously developed and greenfield land
CS9 - Energy and natural resources
CS10 - Waste and recycling
CS11 - Flooding
CS12 - Biodiversity
CS13 - Supporting access to new development

CS14 - Supporting city-wide movement
CS17 - Infrastructure and developer contributions
CS18 - Urban design, town character, historic environment
CS19 - Community safety
CS29 - The Universities
CS30 - Hospitals and medical research

Sites and Housing Plan - Submission
SP39 - Old Road Campus

Other Planning Documents.

- National Planning Policy Framework (NPPF).
- Environmental Impact Assessment (EIA) Regulations 2011.
- Supplementary Planning Documents (SPDs): Planning Obligations, Natural Resource Impact Analysis; Parking Standards, Transport Assessment and Travel Plans.

Public Consultation

Statutory Consultees Etc:

Natural England: No objection; attenuation tanks must be large enough to act as failsafe mitigation; would wish to see details of sustainable drainage system (SUDS) which should focus on infiltration as much as possible to further mitigate impacts on Boundary Brook and Southern fen; hard surfaces should be porous including porous tarmac and limestone chippings etc to maintain high pH of percolating water; evidence of bat roosts on site but proposed mitigation (under a Natural England bat license) would maintain identified population; removal of vegetation should be outside bird nesting season; local authority should consider impacts on local sites of biodiversity and geodiversity interest and local landscape character; opportunity to incorporate biodiversity features beneficial to wildlife.
Environment Agency: No objection subject to conditions relating to surface water drainage scheme, compensatory habitat creation and ground contamination works.
Thames Water: Suggest condition requiring details of foul and surface water drainage strategy; piling method statement required if impact piling is contemplated; suggests various informatives attached to planning permission.
County Highways (i), Drainage: Drainage proposals in Flood Risk Assessment (FRA) appear acceptable but further details requested of design and construction of drainage system.
County Highways (ii): Support proposals subject to financial contribution to mitigation measures of £1,169,231. (See text to report).
Environmental Development: Recommend ground contamination condition; site not at risk of river, surface or groundwater flooding; proposals seek to reduce run off even allowing for climate change which is supported; noise assessment to be carried out; construction environmental management plan required; predicted traffic levels low and no significant impact on local traffic congestion or air pollution expected; medium risk of dust emissions from demolitions, and risk during construction.

Third Parties:

Highfield Residents Association: Increased traffic levels; doubt usage of Park and Ride would increase; if staff numbers increase then cars attempting to park will increase; zero based approach to parking should be adopted; buildings on same building line as NDM building should be 2 storeys only closest to Old Road, Mileway Gardens and Churchill Drive; internal movement routes logical; support entrances from Old Road but may conflict with bus stops; support closure of unofficial footpath from Old Road; potential for cycle routes have not been fully explored; Old Road cycle route within site should be explored; object to any works which impact on Boundary brook; welcome protection of wildlife corridors; support footpath realignment; concern that development should not exacerbate flooding issues or degradation of SSSI; review of local infrastructure, traffic, travel and impact on residential neighbours required.

Individual Comments:
Eight individual comments were received. The main points raised were:

- Park and ride services inadequate.
- Traffic conditions already unsatisfactory and would become worse.
- Strategic examination of traffic required.
- Welcome increased use of public transport.
- Serious attempt at proper cycle route to Oxford required.
- Support development of Park hospital site but building in north - east corner of site opposed on amenity grounds, height of buildings, noise, encroachment into high sensitivity zone.
- Parking likely to spill over into surrounding streets.
- Additional strain on utilities.
- Boundary Brook House is a local building of interest.
- Development could provide sporting facilities for the community.
- University should become involved in maintenance of Warneford Meadow.
- New buildings may appear bulky when viewed from Old road.
- Thames Water comments need to be addressed.
- Safer cycling conditions in Old Road need to be provided.
- Cycle track south of Old Road required.
- Such a large development incompatible with residential area.
- Buildings too bulky.
- Site too densely developed.
- Scale and mass of NDM building should not set precedent.
- Loss of residential amenity from construction, noise, light, traffic movements etc.
- Tree planting will not provide sufficient screening.
- Enforce 20 MPH speed limit.
- Taxi drop off a potential danger to cyclists.
- Impact adverse on water environment and Lye valley Site of Special Scientific Interest (SSSI).
- Disruption during construction.
- Light pollution.
- Proposals for park Hospital site should be reduced.
- Case can be made for research facilities.

- Parking levels should not be increased.
- Travel conditions may affect ability to recruit staff.
- More comprehensive plan including housing should be drawn up.
- Additional tree coverage welcomed, but losses over the years.
- Insufficient consultation.
- Potential for flooding.
- Boundary Brook corridor being damaged.
- Run off discharging to brook needs to be reduced.
- Infiltration of surface water to be preferred to attenuation.
- Porous asphalt, green roofs etc should be included.
- Danger of pollutants from car park.
- North - east building could damage wildlife corridor.
- Trees need to be retained for wildlife potential.

In addition, prior to the submission of the planning application the applicant undertook its own consultation exercises. In December 2011 a presentation was made to the Highfield Residents Association, followed by a further one in January 2012 to the Divinity Road Area Residents Association and Hilltop Residents Association. All three groups were then presented with the emerging proposals the following March. Two workshop sessions with local residents were also held in May 2012. Following these discussions a leaflet drop to over 2000 local residents was undertaken plus press advertisements ahead of two public exhibitions held in May and July 2012 at the Institute of Cancer Medicine at the Old Road Campus. The first was attended by 85 staff, 53 residents and 1 councillor, and the second by 100+ staff, 65 residents and 2 councillors.

The main concerns raised related to the current difficult road conditions in the locality, the poor bus services serving the Old Road site, and the use being made of an informal footpath from Old Road through the landscaped area there. In terms of the proposal itself the principle issues raised related to issues of possible increased traffic congestion; the desire for an improved cycle network in the area and better cycle parking facilities on site; the need to protect wildlife corridors; and what was perceived as the overlarge building mass proposed along the Old Road frontage. The possible use of on - site staff facilities by the local community was also raised.

Officers Assessment:

Background to Proposals.

1. The planning application relates to a site encompassing the existing site of Boundary Brook House (formerly the Park Hospital) and part of the University's Old Road Campus. If the application is permitted the two sites would be combined to form an enlarged campus extending to approximately 6.4 ha. (16 acres). **Appendix 1** refers. The extended campus would be roughly rectangular in shape, bounded by Old Road to the north, Mileway Gardens within the "Little Oxford" development to the west, Roosevelt Drive and the Churchill Hospital to the south and Churchill Drive to the east.

2. The current University campus forms part of its Medical Sciences Division, a centre for biomedical research consisting of 15 separate departments. The campus currently consists of the following buildings, indicated in **Appendix 2:**
   - Richard Doll Building - statistical research into causes and treatment of chronic diseases such as cancer, heart attack and stroke.
   - Old Road Research Building - cancer research.
   - Wellcome Trust for Human Genetics - research into diseases such as hypertension, diabetes, heart disease, infectious diseases, psychiatric disorders and multiple sclerosis.
   - Henry Wellcome Building for Particle Imaging - macromolecular molecules such as human and animal viruses.
   - Henry Wellcome building for Molecular Physiology - kidney medicine, proteomics and computational structural biology.
   - Rosemary Rue building - preventative disease, health promotion etc.
   - Triangle Building - delivery of postgraduate medical and dental education.

3. To these two further buildings are currently under construction, due for completion late in 2013:
   - Kennedy Institute of Rheumatology - medical approaches to rheumatology.
   - Nuffield Department of Medicine - biological science and medical applications.

4. Vehicular access is taken to the existing campus from a single point off Roosevelt Drive with the bulk of the 251 car parking spaces on site located to the north - east corner. Whilst the Kennedy and NDM are under construction temporary parking facilities have been created to the southern part of the hospital gardens. Pedestrian access is taken to the campus from two further points on Roosevelt Drive, to the west of the Doll Building and between the Doll and Campus Research Building. From Old Road pedestrian access is taken east of the triangle Building and from a point approximately opposite the junction with Bickerton Road. A third informal pedestrian route from Old Road accesses the main car park at the north - east corner of the campus approximately opposite the junction with Highfield Road. In addition public rights of way exist either side of the Boundary Brook along the western side of the site, plus a further right of way which passes through the current car park and landscaped area along the northern side. The proposals seek to rationalise this latter route which is unrelated to the primary movements of pedestrians on site.

5. The Boundary Brook House site is set in spacious grounds in a parkland setting with a series of undistinguished single storey and temporary buildings within its grounds, with the original 3 storey building located at the junction of Old Road and Churchill Drive. Built in 1885 as Highfield House, possibly by the architect George Gardiner, the house has been much altered internally and externally over the years to facilitate its use as a hospital since the 1930s. This has included recent timber clad extensions on its eastern elevation. Whilst the house has a pleasant elevation towards the grounds of the hospital, it is not an especially significant building, though if permission is granted a condition requiring a full photographic record would be imposed.

The high stone wall to the north of Boundary Brook House along the Old Road frontage is intended for retention.

6. Following its establishment as a hospital for Functional Nervous Disorders in 1939 the Park became a psychiatric hospital in 1958 for children suffering from a range of psychiatric and development problems, becoming a national centre for the assessment and in patient treatment of children with complex epilepsy and emotional and behavioural difficulties. In recent years the renamed Boundary Brook House has housed administrative and clinical services of the Child and Adolescent Mental Health Service.

7. The hospital site has vehicular access from three points, two from Churchill Drive and one from Old Road, providing 60 car parking spaces in total. A breach in the high stone wall near the Churchill Drive junction provides a pedestrian access to the hospital.

8. These proposals are made in outline only with the intention of establishing the principle of development on the combined site for medical research purposes, providing a basis for future reserved matters applications to come forward over a period of years. Medical science research remains one of the strengths of the local "knowledge economy" and in total some 45,000 sq m of additional floorspace is envisaged within 5 new buildings, four of them research buildings and the fifth containing multi level car parking, servicing and support facilities. Boundary Brook House would remain on site however for a period of perhaps 10 years, on a "lease back "arrangement from the University until such time as alternative accommodation were available for its activities. Car parking would increase on the combined site by 148 spaces to a total of 459, whilst staff levels would increase by 1102 from current levels or by 952 following completion and occupation of the Kennedy and NDM Buildings. Due to modern ways of working and working arrangements with other arms of the university and other institutions, it is anticipated that on full completion there would be a maximum of 90% of the total employment level on site at any one time, or 2565.

9. An Environmental Statement (ES) accompanies the planning application.

10. Officers consider the principal determining issues to be:
    - planning policy;
    - site layout and built forms;
    - access;
    - landscaping;
    - water environment and biodiversity;
    - sustainability; and
    - archaeology.

Planning Policy.

11. In addition to the range of general policies listed above the combined Old Road site is specifically allocated for development the Oxford Local Plan adopted in 2005 under site specific policies DS.36 and DS.64. The former

relates to the University's existing Old Road Campus which identifies the site as suitable for additional medical research development, whilst the latter allocated the Boundary Brook House site for a range of uses including health care facilities, teaching, research and purpose built student accommodation. Since the adoption of the Local Plan the Oxford Core Strategy was adopted in 2011 and seeks to support the education, medicine and research sectors in the Headington area, in particular at policy CS.30:

"Hospital - related development will continue to be focused on existing sites in Headington and Marston.
Planning permission will be granted for healthcare facilities and medical research associated with the universities and hospital sites in Headington and Marston. Further sites if required, will be considered in the Site Allocations DPD.
Development will be expected to minimise additional traffic through travel planning, and improve accessibility to the Headington and Marston sites by walking, cycling and public transport."

12. This commitment was carried through to the Sites and Housing Plan which at the time of writing is nearing adoption following public examination earlier this year. The relevant allocations at the earlier stages of preparation of the Plan relating to the existing Old Road Campus were SP39 relating to the existing campus, and SP 46 relating to Boundary Brook House. However following examination and in the context of the University purchasing the Boundary Brook House site these have now been combined into a reworded policy SP.39:

"Planning permission will be granted for medical teaching and research at Old Road Campus. Planning permission will not be granted for any other uses.
The development will be expected to minimise car parking spaces on site. Applicants will be expected to demonstrate how the development mitigates against traffic impacts and maximises access by alternative means of transport. Pedestrian and cycle access should be created across the whole site.
Planning permission will only be granted if it can be proven that there would be no adverse impact upon surface and groundwater flow to the Lye Valley SSSI. Development proposals should reduce surface water run off in the area and should be accompanied by an assessment of groundwater and surface water.
Development proposals must incorporate sustainable drainage with an acceptable management plan."

13. As a consequence the current proposals fall squarely in line with the Sites and Housing Plan's allocation for the site.

14. On one other matter, recent permissions for the University have been subject to a condition required by Core Strategy policy CS25 that teaching accommodation should not be occupied until the University has achieved a target of 3,000 or less of its students living outside University provided accommodation. The policy relates to new teaching / academic floorspace however whereas the current proposal is research orientated. In any event

the University is already at or about the 3,000 target.

Site Layout and Built Forms.

15. The existing Old Road Campus has grown in an incremental fashion in recent times with the Richard Doll Building and Old Road Campus Research Building (Cancer Research) being the most recent major additions, plus the NDM and Kennedy Buildings now under construction. The intention of these current proposals is to extend the medical research campus over a period of years to incorporate the Boundary Brook House site and to rationalise the way in which the enlarged site would function. Although submitted in outline only, the intention of the planning application is to create 5 new buildings at the locations indicated in **Appendix 3.**

16. Four of the buildings would be for further medical research, and the fifth a facilities building containing decked car parking at upper levels, (relocating parking from elsewhere on site), together with central servicing for all the buildings plus staff gymnasium at basement level, and café, crèche and small shop at ground floor level. The intention would be that this building would be constructed at an early stage, allowing the existing car park site to the north - west corner to then be available for development. With car parking and servicing for the site centralised, and located at the entrance to the enlarged site from Roosevelt Drive then this would allow the site to be essentially free of vehicles, other than for disabled parking and maintenance vehicles.

17. The existing access from Roosevelt Drive would form the central spine to the enlarged site and its only vehicular access point, but with a number of pedestrian and cycle access points as now from Roosevelt Drive and from Old Road. There would also be a taxi drop off space facility at Old Road. These arrangements would not only allow the campus to achieve more of a parkland setting but would also allow a central space to the rear of the Wellcome Trust Centre, Doll Building, Old Road Campus Building and Kennedy Institute to become a centralised servicing area for these buildings. In sum a more logical and legible layout for the site would be achieved for the site which would be essentially car free. Related matters on access arrangements and landscaping are considered in more detail later in this report.

18. The four new research buildings are proposed to be of a similar size and scale to those currently existing on site. This would generally be on 3 floors plus basement and with plant enclosures at roof level. The distance between floors would generally be 4.5m for these buildings, rather more than for domestic buildings due to the nature of their use. For the facilities building the ground floor would have a height of 5.0m to allow entry for service vehicles, but upper floors would be 2.9m where such headroom would not be required.

19. The recently approved Kennedy Institute Building now well advanced in its construction is a 3 storey structure plus basement and plant room at roof level. It measures approximately 14.8m to 16.8m to main parapet level and approximately 18.6m to 20.8m to the top of the plant room, front to rear. The

variation in height reflects the fall in ground level from east to west across the site. The NDM building is also of three storeys plus basement and plant room and of a similar height. It rises to approximately 14.8m to 16.0m to parapet and 18.2m to 20.0m to plant room, again taking account of the fall in ground level east to west. Other existing buildings are of similar height to parapet level:

- Old Road campus Building - 17.2m (20.5m to top of plant).
- Richard Doll Building - 15.4m
- Wellcome Trust for Human Genetics - 15.1m
- Henry welcome Building for particle imaging -13.0m
- Henry Welcome Building for Molecular Physiology - 13.0m.
- Rosemary Rue Building - 11.9m.
- Boundary Brook House - 15.3m (to ridge).

20. By comparison the new buildings proposed would rise to the following heights to parapet and plant room level:
    - Building B1 Laboratory - 9.0m (14.0m).
    - Building B2 Laboratory - 14.5m (19.5).
    - Building B3 Laboratory - 13.5m (18.5m)
    - Building B4 Facilities Building - 17.7m.
    - Building B5 Laboratory - 13.5m (18.5m).

21. Of these, Buildings B2, B3 and B5 would be 3 storey plus basement and plant room with Building B1 to the north - east corner of the site (on the current car park) a two storey building only plus plant room, reflecting its more sensitive position close to residential properties in Old Road and Mileway Gardens. In all cases, in the event of planning permission being granted a condition would be imposed limiting building heights to the above maxima in each case, and requiring any roof level plant enclosures to be set back a minimum of 2m from the parapet edge to each building. Moreover accompanying the planning application is a "perameters plan" which indicates the general disposition of buildings and also identifies a zone of approximately 50m from the nearest houses within which built development would not be permitted. This is consistent with the principles adopted for the Kennedy and NDM buildings, the latter being approximately 34m from the northern boundary of the site, including a band of tree and hedge screening approximately 15m wide.

22. The exception to the 50m no build zone would be Building B3 to the eastern side of the site which would be located close to the junction of Old Road and Churchill Drive and set behind the retained high stone wall there. This building would be no closer that the existing Boundary Brook House however and approximately 25m from the nearest house to the north side of Old Road. Again the general location of buildings would be restricted to those indicated in the perameters plan.

23. In sum, with these controls in place to inform and structure detailed designs for individual buildings at the reserved matters stage, and their relationships to one another, it is considered that the foundations can be laid for an expanded campus which would respond positively to its context whilst also improving existing conditions on site overall.

Access.

24. Car Parking. Currently there are some 251 car parking spaces on the Old Road Campus primarily located to the north - west of the site, plus a further 60 at Boundary Brook House, totally 311 on the combined site. This is intended to increase to 459 on completion of the development, 450 within the new facilities building (including disabled spaces), plus 9 other spaces at surface level around the site, 6 for disabled use, and 3 for servicing requirements. Currently parking is heavily restrained with the University operating a strict permit system as part of its Travel Plan. The 251 spaces serving the current staffing levels of 1583 are therefore provided at a ratio of 1 space per 6.3 staff. This ratio is intended to be maintained on completion of the development with 459 spaces then serving 2850 staff. The standard of 1 space per 6.3 staff compares with a standard suggested in the adopted Local Plan of 1 per 2 staff for research and development premises or for offices. As the development of the site would take place over a number of years a parking strategy is required which ensures that in the intervening years and on completion that parking is never provided in excess of the 1 space per 6.3 staff standard at any time.

25. When supported by the mitigation measures set out below to address uncontrolled parking in the locality and to support the provision of alternative means of access to the site, then this level of parking is appropriate and supportable given also environmental considerations and the existing capacity of the highway network in the Headington area.

26. Transport Assessment. A detailed Transport Assessment accompanies the planning application. This includes travel survey information which reveals that 31% of staff at the Old Road campus currently arrive by car; 34% by cycle and 20% on foot. The bulk of the remainder, 12%, arrive by public transport. The 31% of staff arriving by car generate 178 car arrivals in the morning peak, and 168 departures in the evening peak. Without any mitigation these figures would rise by 83 and 79 respectively as a consequence of the development to 261 and 247, some of whom, as now, would park in uncontrolled streets in the vicinity. This would not be acceptable to Highway or Planning authorities given that the road network and principal road junctions serving the existing site already experience capacity problems at peak times. However the introduction of CPZs in the Lye valley and Wood Farm areas would prevent new staff from the combined campus parking in residential streets and therefore from driving into the area. The additional 149 spaces on site would result in an additional 55 vehicle trips arriving at the development itself in the morning peak and an additional 52 leaving in the evening peak. However with CPZ controls in place a greater amount of commuter parking to other institutions such as the Nuffield Orthopaedic and Churchill Hospitals would be removed from nearby residential streets.

27. With the CPZs and other measures in place (set out below) the overall impact on the local highway network is anticipated to be at least neutral - it could even be marginally improved. As a consequence no highway measures to address additional traffic are required. The costs of implementing the CPZ

would amount to £250,000 however which the University is agreeable to funding.

28. Public Transport. With the restraint on car parking imposed on site and on street within the locality, then measures need to be in place to allow staff to gain access to the site by modes other than the private car, particularly public transport. This applies to both staff who live within the city and outside which each account for approximately 50% of the current numbers employed. The University already operates a Travel Plan which will therefore be required to be applied and updated to reflect the particular needs of the enlarged campus, and to include incentives to use public transport in particular. These could include extending the existing bus pass system in operation, season ticket loans, a University operated bus service etc. Attached as **Appendix 4** is an extract from the submitted documentation highlighting possible measures to be incorporated into the Travel Plan to encourage use of modes other than the private car. With incentives in place the target would be to increase bus usage from 10% currently to 13.5%, and Park and Ride usage from 2% to 10%. This would largely be at the expense of those arriving by car which would decline from 31% to 17.5%.

29. With the completion of the development there would be an additional 1117 new staff employed on site, not including the Kennedy and NDM Buildings now under construction. Only 90% of them would be on site at any one time however, or 1005 staff. This means that the additional proportions arriving by bus services and Park and Ride would equate to an additional 136 and 101 staff respectively, or 247 in total. To accommodate these extra numbers additional infrastructure would therefore be required. In terms of public transport the Old Road site is currently served by a variety of bus services of variable quality. The no.4 service provides a direct link to the city centre, railway station and Seacourt Park and Ride at 10 minute intervals. Whilst there are more frequent services along Old Road and London Road in particular, the latter being some 700m from the campus. Park and Ride service 600 from Thornhill serves the site but is of poor quality however as the car park is currently at capacity. Similarly service 700 from Water Eaton is connected to the Old Road site but is not well used by University staff.

30. Although there is a committed expansion at Thornhill of 550 spaces, this has not taken into account the need of these latest proposals. Similarly at Water Eaton where 1000 spaces are committed but for rail users as part of the Chiltern Line improvements. Therefore additional funding is required to reflect the additional numbers generated from Old Road. Based on the estimated cost of providing additional spaces at Thornhill in 2012, this equates to a required sum of £505,000 towards additional Park and Ride capacity. The University has agreed to meet this funding.

31. In addition to the provision of additional parking capacity at Park and Ride, the Highway Authority calculate a need to improve actual bus services to Old Road. In particular Redbridge Park and Ride could cater for demand from staff travelling from the south of the city and / or the "Eastern Arc" but would require initial support in the form of a declining 5 year subsidy. The Highway

Authority calculate this to amount to £128,000 based on the total cost of the subsidy, the estimated proportion of staff who would use this particular service, and the number of buses this would equate to. Again the University is agreeable to meeting this funding.

32. Pedestrians and Cyclists. Currently there are some 5 points along Old Road where pedestrians can gain access to the combined Old Road and Boundary Brook House sites. From east to west these are:
    - at a point close to the junction of Old Road with Churchill Drive via a gated entrance through the high stone wall;
    - via a second vehicular breach in the stone wall opposite the junction with Stapleton Road, leading to an informal car park;
    - via the purpose built cycle and pedestrian access east of the Triangle Building;
    - from a narrow pedestrian access opposite and west of the junction with Bickerton Road; and
    - from the informal route through undulating ground approximately opposite the mid point between the junctions of Old Road with Highfield Avenue and Finch Close.

33. With the expansion of the Old Road Campus onto the Boundary Brook House site, an opportunity exists to rationalise and improve pedestrian and cycle access from Old Road, whilst retaining the existing access points from the south off Roosevelt Drive.

34. From east to west along Old Road the following is suggested:
    - The existing access through the stone wall is retained, and improved as appropriate. Its location is well suited to reflect natural desire lines for pedestrians and cyclists, being adjacent to a traffic controlled pedestrian crossing and close to the junction with Lime Walk which gives direct access to the Headington District Centre to the north. It is also close to a west bound bus stop.
    - Further to the west the existing vehicular access is intended to be remodelled to provide a taxi drop off, but with no vehicular access into the site itself. Pedestrian and cycle access is appropriate however as the point of entry is directly opposite Stapleton Road and adjacent to the proposed B2 Building.
    - The existing purpose built access point to the east of the Triangle Building is less well located to serve the expanded campus however even though it is close to a pedestrian crossing at this point. Rather it would be better and more logically located a little further west as an extension to the main north - south spine road through the campus from Roosevelt Drive.
    - The access located opposite and west of the junction with Bickerton Road can remain as it gives good access to the NDM and other existing buildings, though it would be required to be improved accordingly.
    - The last informal access at the north - east corner of the site is currently poor and inappropriate as it passes through steep and undulating ground. Potential exists to create a further access along this stretch of the northern boundary at some point a little further east however, (with the existing route closed off accordingly), as it would be close to both east and west

bound bus stops and the proposed B1 Building.

35. For each of these access points it is suggested that they be made available for both pedestrian and cycle usage subject to the removal and replacement of such tree and hedge coverage as may be required. On a related point, it has been suggested that a cycle route could be created to the south side of Old Road within the application site. However to achieve this would require the loss of large numbers of mature trees which provide an important green setting for the site. There are also difficult level changes to negotiate with cyclists also partially hidden from view behind the retained stone wall and remaining tree coverage. The result would be a poor quality, unattractive and potentially threatening route unlikely to provide anything but very limited benefit for the its short 375 m length. The Highway Authority for its part has concluded that the financial and environmental costs would significantly outweigh the benefits. Planning Officers would concur with this view and have concluded that it should not be pursued.

36. In terms of cycling facilities, there are currently about 400 cycle parking spaces on site. It is intended to increase this number to over 1000, so that cycle parking is provided at a ratio of at least 1 space per 2.8 staff. This compares to a standard of 1 per 5 staff for offices or hospitals suggested in the adopted Local Plan. In support of the additional on - site provision which is supported by Highways and Planning Officers, funding for improvements to cycling facilities in the locality are recommended by the Highway Authority, which could include improvements at Windmill Road, Morrell Avenue, Warneford Lane, Headley Way, Gipsy Lane, Old Road (east to Quarry Road). Footpath improvements to existing rights of way are also suggested. Based on the number of staff anticipated to cycle and walk to the expanded site, the Highway Authority therefore request a financial contribution of £286,231 for this element of improved access to the site, which once again the University is agreeable to funding

37. In summary, by funding measures to reduce the amount of commuter car parking taking place off - site, and retaining traffic generation in the locality at existing or slightly improved levels, then highways conditions can be controlled so as to maintain the status quo. In turn funding is secured to contribute towards the provision of alternative means to access the campus, with a Travel Plan in place to encourage their usage. Both Highways and Planning Officers are able to support such a strategy which would allow the development to take place without exacerbating existing conditions in the locality.

Landscaping.

38. The whole of the extended Old Road Campus was originally part of the Highfield Park estate built about 1886 and set in 28 acres of land which included a pleasure garden and landscaped parkland extending to the Boundary Brook to the west, and further south than the current site boundary. Screening belts of trees survive to the western and northern boundaries as does a small copse of trees which extends as a north - south spine through

the current Boundary Brook House site west of the house. To the west of this spine part of the current Boundary Brook House site given over to grass is currently being used as a temporary car park whilst the Kennedy and NDM buildings are under construction. A number of individually located trees are also present within the Boundary Brook House site. These internal arboricultural features and their grassland surroundings are a remnant of the original parkland landscape, enabling an interpretation of the site's setting and development over time. The trees and hedgerow which currently form the western boundary to Boundary Brook House along the edge of the campus access road are not part of the original landscaped gardens but more recent in origin.

39. On the combined site there are some 342 individual trees recorded in the tree survey accompanying the planning application. Of these 136 are within the existing campus site made up of 5 categorised as grade A quality under British Standard BS 5834: 2012 as being of high quality; 49 of category B (moderate quality) and 72 (low value). A further 10 are within category U, being dead or towards the end of their life expectancy. At the Boundary Brook House site the 207 surveyed trees there are made up of 3 grade A, 56 grade B, 106 grade C and 30 grade U. In addition 11 further trees were felled following recommendations in the survey. None of the trees on site are protected by Tree Preservation Order, or by conservation area status.

40. Overall the enlarged site consists of a mix of tree species and age classes, and of quality and life expectancy. The mature tree coverage to the perimeter of the enlarged site has an important influence in screening and softening views of the current buildings as well as providing a wider green setting, especially along the Boundary Brook to the west and Old Road to the north. Along the western and northern edges are mixed woodland areas including horse chestnut, Corsican pine, sycamore and maple, plus low level understorey planting and boundary hedging, whilst the central spine of trees within the gardens of Boundary Brook House consists of 22 trees including Corsican pine and European larch reaching the end of their life and suppressing the mature beech, oak and sycamore specimens there. To the south of the Boundary Brook House site are sycamore, lime and ash, whilst along the western boundary adjacent to the current access road sycamore, Norway maple, lime and larch.

41. The proposals envisage the loss of some160 trees made up of 18 in category B, 96 category C and 46 category U. No category A trees are lost. However the numbers of trees lost needs to be viewed within an assessment of the broader landscape, the needs of the allocated site, and also the condition and value of many of those to be lost. The hedgerow and incorporated trees along the western boundary of Boundary Brook House for example are lost due to the integration of the two sites and the creation of a new central avenue. The hedgerow and tree line has value in the context of the existing site boundaries, providing separation and visual interest. They are not a feature of the original Highfield Park however and their loss is considered to be adequately mitigated by new landscaping proposals including the formal avenue along the new access road running north - south through the site.

42. Moreover the landscape strategy seeks to address the existing lack of clarity in terms of pedestrian routes and movement through the campus, focussing on remedying these issues as well as mitigating any visual harm to nearby residential properties. The intention therefore is to create a sense of space within the combined campus reflecting and integrating the parkland character, establishing new spaces, unifying currently disparate elements of the site, retaining the best tree coverage, and increasing tree and hedgerow diversity.

43. Landscape design elements therefore include new tree belt planting to the Old Road boundary opposite Lime Walk plus internal street planting to provide a sense of transition from wooded edge areas into the interior of the site, and to assist in defining routes and unify spaces. A formal avenue of trees is proposed to be planted along the central access road to provide a distinctive centrepiece to the internal planting, whilst single species hedges are planted along building facades to ornament buildings and streets. Within the Boundary Brook House part of the combined site two external gathering spaces are proposed displaying existing mature trees. However in creating these two spaces a pinch point is created between the new spaces by buildings B2 and B4, creating an artificial separation of this parkland group of trees. Adjustment to the positioning of buildings at this point may therefore be appropriate.

44. Along the important northern perimeter, to address issues of short and long term permeability to the screening function of the woodland belt here, a series of design proposals have been produced which include a new hedge to replace the existing one made up of disease prone elm suckers and ivy growing on old mesh fencing. A temporary planted screen to the rear of the existing hedge would provide continuity of screening while a new more sustainable hedge was established. It is proposed that the Old Road boundary planting would be implemented as part of a detailed woodland management plan agreed by condition. This would include details of selective removals / thinning of individual trees in order to enable the establishment of new trees to diversify the age class of the woodland and promote sustainability. Within this area no removals are proposed other than for sound arboricultural and landscaping reasons, (with the planting supplemented accordingly), or to allow the new cycle and pedestrian links to be created from Old Road. The intended closure of the informal access through the undulating ground at the north - west corner of the site is welcomed in these terms, as is the intention to rationalise existing rights of way which in part cross through the woodland but which no longer relate to the built form of development or pedestrian movements created by it.

45. Whilst detailed landscaping proposals would come forward at the Reserved Matters stage, typical planting for the proposed street and courtyard areas is indicated to be small leaved lime, common hornbeam, Caucasian lime, rowan and whitebeam, and for parkland edges and boundaries Caucasian lime, small leaved lime, silver birch, Downy birch and Deodar cedar. An illustration of the landscaping proposals as they relate to individual buildings is attached as **Appendix 5** to this report.

46. Overall officers consider that the landscape strategy is correctly focused on improvements to the functionality of the combined site for its proposed use; preservation of key landscape features and enhancement and management of boundary vegetation important for screening; visual amenity; and biodiversity. Indicative proposals for the woodland belts provide reassurance that the importance of these is both understood and can be appropriately managed into the future, thereby securing screening and visual amenity benefit. The proposals for rationalising existing rights of way and new pedestrian / cycle access points offer improvements to public accessibility, safety and increases the prospects for successful enhancement of the Old Road wooded belt. In general the landscape proposals therefore provide new opportunities for accessibility, legibility and public open spaces within the context of the enlarged campus. The proposed central avenue linking Roosevelt Drive to the Old Road boundary and its indicative spine of large amenity trees will provide an interesting central axis which will act to unify the two sites and create a sense of place.

Water Environment and Biodiversity.

47. The Boundary Brook exists to the west of the site and flows south of the Churchill Hospital and across part of Southfield Golf Course. Localised flooding from the brook has occurred in the past further south still in the Cowley Marsh area. For this reason and to protect biodiversity interests, (from erosion created by storm flow), when the Kennedy and NDM buildings were permitted it was with a requirement that surface water from those developments would discharge either directly to the brook as now or be retained on site in attenuation systems and released into the brook at controlled greenfield rates. This would ensure that the existing conditions in terms of flow rates along the wildlife corridor were maintained and that other sensitive nature conservation areas downstream were also not adversely affected.

48. The Lye Valley Site of Special Scientific Interest (SSSI) is located to the east of the site and comprises two distinct sections. The northern section lies approximately 500m from the application site, and the smaller southern section about 1000m away. The SSSI contains important calcareous fens which can be affected by changes to the quality and quantity of groundwater and surface water runoff. The Lye Valley Brook flows through the northern section of the SSSI and joins the Boundary Brook approximately 950m to the south - east of the application site before flowing through the southern section of the SSSI. Areas immediately adjacent to the SSSI sites are of County wide significance for nature conservation and identified as Sites of Local Interest for Nature Conservation (SLINCs) in the Local Plan. They too are reliant on the quality of groundwater. Springs and wetland along the north of the Boundary Brook are of wildlife value and dependent on groundwater

49. Prior to detailed design work at the Reserved Matters stage the applicant has committed to undertaking a fuller site investigation to establish the ground conditions, groundwater levels and flow directions as well as permeability /

infiltration rates in more detail. From the information available to date it appears that infiltration rates on site are very limited, which suggests that there may not be any impact on the northern SSSI and adjacent nature conservation sites from the new developments. Rather if further ground investigations indicate groundwater is moving from north - east to south - west towards Boundary Brook as is believed to be the case, then infiltration changes would not impact the northern SSSI in any event, and be less likely to feed the springs along the northern edge of the Boundary Brook. In terms of the southern section, where surface water changes rather than groundwater changes could be more significant, then the intention would be to introduce attenuation systems as for the Kennedy and NDM buildings so that surface water continues to be released at controlled greenfield rates agreed with the Environment Agency, thus protecting these important nature conservation interests.

50. A condition to the outline planning permission if granted would therefore require details of all drainage measures including sustainable drainage wherever possible to mimic natural conditions, plus attenuation to retain and release water at controlled greenfield rates. The Environment Agency and Natural England require that for those areas of the combined site not currently covered by buildings or hard surfaces, that the drainage strategy should be based upon sustainable drainage principles, (including maximising infiltration), and demonstrate that surface water runoff generated up to and including the 1 in 100 year plus climate change critical storm event would not exceed 25 l/s.

51. Generally the majority of the combined campus itself is of only limited ecological value as it is dominated by buildings, hard standings, and mown grassland. However the landscaped areas provide habitats for bird life, especially to the northern and western boundaries, the latter forming a recognised wildlife corridor. Detailed surveys have indicated that one building on the Boundary Brook House site supports a non - breeding summer bat roost of an individual common pipistrelle bat, plus evidence that a second building has been visited by a single long eared bat in the past. There is no evidence of any trees having been used as bat roosts. The woodland areas would however support small numbers of garden and woodland nesting birds. No evidence of water voles was found at the Boundary Brook.

52. In these circumstances an opportunity therefore exists to enhance wildlife by creating new habitats. A condition to the permission would require compensatory and enhanced habitat creation from the development

Sustainability.

53. Since February 2009 it has been the University's policy that all capital projects with a value in excess of £1m should achieve a sustainability rating of BREEAM excellent which would be the case for each of the buildings proposed in this current application. At the same time the City Council would require each building to achieve a rating of at least 6 out of 11 on its Natural Resource Impact Analysis (NRIA). However neither of these assessments can be undertaken at this stage as the application is in outline only and the

relevant detailing not yet fully available. As such a condition would be applied in the event of planning permission being granted requiring a sustainability strategy in the form of an NRIA return (or its future equivalent) for each Reserved Matters application which follows.

54. In achieving BREEAM excellent status the University seeks to reduce the carbon emissions for the University estate to 33% below 2005/6 baseline levels by the end of the academic year 2020/1. This requirement reflects too the Government's increasingly stringent targets for carbon emissions in Part L of the Building Regulations. The approach would therefore be to reduce energy requirements through passive design measures; by the use of high efficiency lighting, heating and appliances; and the use of low and zero carbon (LZC) technologies. The means by which individual buildings responds to these principles and the NRIA's current requirement for 20% on site renewables will emerge later in the process when the precise nature of individual buildings is known at the reserved matters stage. This will also depend, for example, on the balance of office and laboratory based research within each building.

55. On other related matters, waste would be reduced through reuse and recycling and initiatives such as the University's "Swap Shop" scheme where equipment no longer required is advertised within departments for reuse by others. Water use would be reduced through the use of low flow sanitary fittings, rainwater harvesting, use of grey water and landscaping which requires low or no irrigation, and where required would be via recycled water.

Archaeology.

56. The National Planning Policy Framework require local planning authorities to recognise that heritage assets are an irreplaceable resource and conserve them in a manner appropriate to their significance, for example either by preservation in situ or by record. As such where a site includes or has the potential to include heritage assets with archaeological interest, local planning authorities should require applicants to submit an appropriate desk - based assessment and where necessary a field evaluation of the archaeology. These current proposals relate to an area which has been identified as having potential for Roman remains as it lies within an extensive and dispersed landscape of pottery manufacturing sites which by 3rd century comprised a regional industry of national importance. Well preserved kilns of the type and concentration at the nearby Churchill site would be of considerable interest for example. As each of the proposed buildings is intended to possess a basement, then the potential would exist to destroy potentially important finds.

57. A preliminary geophysical survey of the Boundary Brook House site has therefore been undertaken but no pottery kilns or other archaeology of interest found. A condition requiring a watching brief is recommended.

Other Matters.

58. Air Quality. The whole of the city is designated as an Air Quality Management

Area (AQMA).The potential exists for a deterioration in air quality from several sources: during construction of individual buildings (especially where demolition is involved); from traffic generated; and from emissions from completed buildings. During construction the development would be subject to a Construction Environmental Management Plan to be agreed beforehand which would control the way in which the site were to be operated. This would include measures to control dust from demolitions, (for example by spray methods), as well as other emissions. A Construction Traffic Management Plan including routing arrangements and details of how construction workers would access the site each day would also be required. Following completion of buildings traffic is not anticipated to increase overall, whilst servicing arrangements would rationalise deliveries which would be centred on the new facilities building. Activities within the proposed buildings would not give rise to noxious emissions, and modern efficient boilers for heating would be used throughout those emissions would be negligible. Environmental Development colleagues have been fully consulted on the proposals and subject to normal working procedures raise no concerns.

59. Noise. Several sources of noise are possible from the development: from traffic movements, from construction; and from noise emissions from individual buildings, primarily plant required to serve the development. Traffic movements from the development following completion would increase as there would be more parking on site than currently exists but would be more than offset offset by a reduction in traffic movements generally in the locality, whilst during construction movements to and from the site would be controlled and hours of working limited. Plant to serve the completed buildings would in most cases be located either within buildings, or within enclosures at roof level. Again construction impacts would be addressed by the Construction Environmental Management Plan and Construction Traffic Plan. The applicants indicate that noise from plant at completed buildings would be controlled to 5 dBA below existing background levels when measured in accordance with the requirements of British Standard BS4142:1997at 1m from the nearest noise sensitive premises. Environmental Development colleagues recommend details are submitted to demonstrate that that level is achievable.

60. Vibration. During construction the potential for vibration can arise from piling methods in particular. Impact methods of piling would generally be avoided however, whilst other operations would normally be short lived. Vibration from demolition and construction can on occasions exceed British Standard 6472, but even if this were the case for short periods, in view of the reasonable distances from nearby residential properties, the likelihood of it causing even cosmetic damage to fragile buildings is assessed as negligible.

61. Public Art. The development is eligible for public art to be provided as part of the design and layout of the site. This could take many forms, from freestanding pieces to bespoke elements integral to the actual fabric of the buildings or other forms. They should however all be available for the wider public to enjoy, rather than just staff employed. As a precursor to the commissioning of public art in whatever form ultimately sought across the

enlarged campus, it is suggested that a public arts strategy be submitted and agreed from which detailed proposals can come forward.

Conclusion.

62. The proposals represent a major enlargement at the University's Old Road Campus by incorporating the adjacent Boundary Brook House site as envisaged by policy SP39 of the emerging Sites and Housing Plan shortly expected to be formally adopted. The intention would be to build out the enlarged site over a period of years with the existing Boundary Brook House building remaining until later stages of development. As all the details of how the site would be laid out are not available at this stage, an outline planning application is submitted, but which commits the University to a series of basic principles in the way the site would be laid out over a period of years via a "perameters plan" and other controls secured by condition, including building heights.

63. These controls would ensure that buildings were of an appropriate scale and height consistent with buildings on the existing campus, and in their relationship to nearby residential properties. Financial contributions secured from the University would be used to address and mitigate the potential for increased traffic in a locality which already experiences capacity issues at nearby junctions during peak periods. Funding for alternative means of accessing the site is also achieved and a Travel Plan secured to encourage their use. Access to and through the site for pedestrians and cyclists would be rationalised and improved, landscaping undertaken to mitigate trees lost to construction, and issues relating to the potential for flooding, impacts on biodiversity and other environmental considerations addressed.

64. Lastly, and importantly, the development would secure significant additional employment in the field of medical science research which remains one of the strengths of the local economy.

65. Committee is recommended to support the proposals accordingly.

Human Rights Act 1998

Officers have considered the Human Rights Act 1998 in reaching a recommendation to grant planning permission, subject to conditions and accompanying legal agreement. Officers have considered the potential interference with the rights of the owners/occupiers of surrounding properties under Article 8 and/or Article 1 of the First Protocol of the Act and consider that it is proportionate.

Officers have also considered the interference with the human rights of the applicant under Article 8 and/or Article 1 of the First Protocol caused by imposing conditions. Officers consider that the conditions are necessary to protect the rights and freedoms of others and to control the use of property in accordance

with the general interest. The interference is therefore justifiable and proportionate.

Section 17 of the Crime and Disorder Act 1998

Officers have considered, with due regard, the likely effect of the proposal on the need to reduce crime and disorder as part of the determination of this application, in accordance with section 17 of the Crime and Disorder Act 1998. In reaching a recommendation to grant planning permission subject to conditions and an accompanying legal agreement, officers consider that the proposal will not undermine crime prevention or the promotion of community safety.

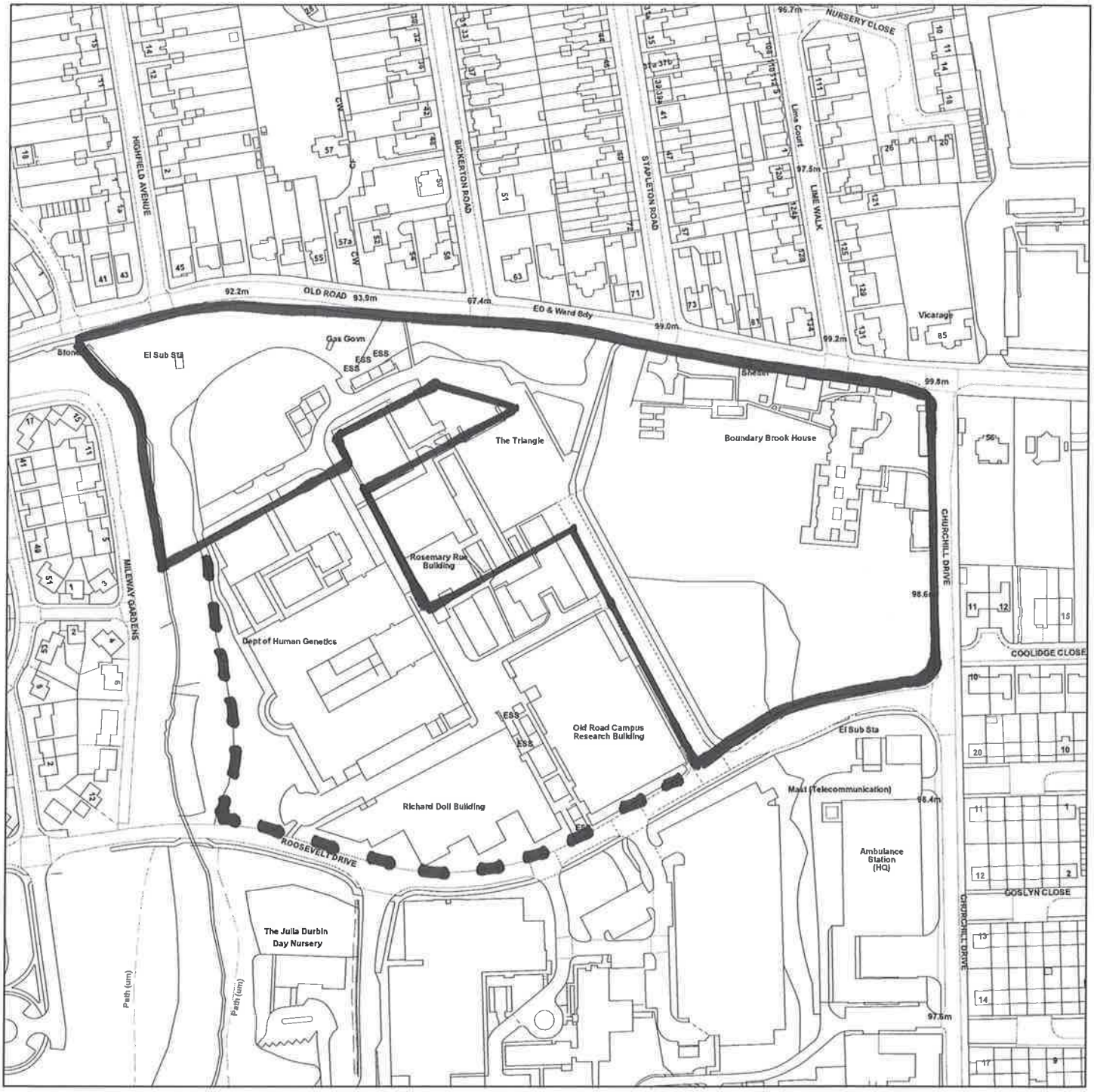
Background Papers: Applications 12/02072/OUT, 11/01054/FUL, 05/02194/FUL.

Contact Officer: Murray Hancock
Extension: 2153
Date: 19th December 2012

APPENDIX 1

12/02072/OUT

University of Oxford Old Road Campus, Roosevelt Drive



Scale : 1:2500

Km 0.05 0.1 0.15 0.2

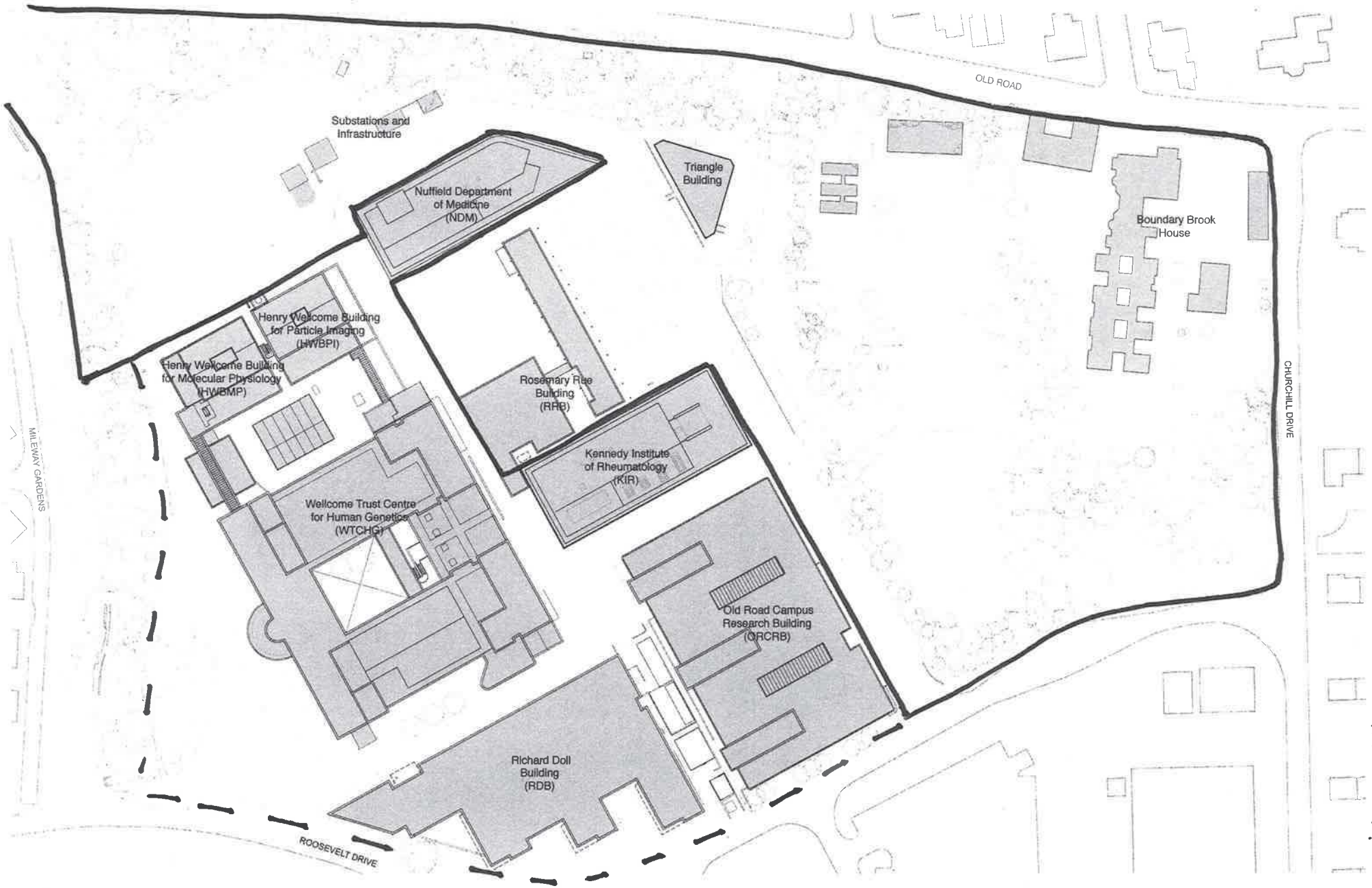
Organisation	Oxford City Council
Department	Planning
Comments	
Date	22 November 2012
SLA Number	100019348

Existing Layout

Site Analysis

The Site in Context

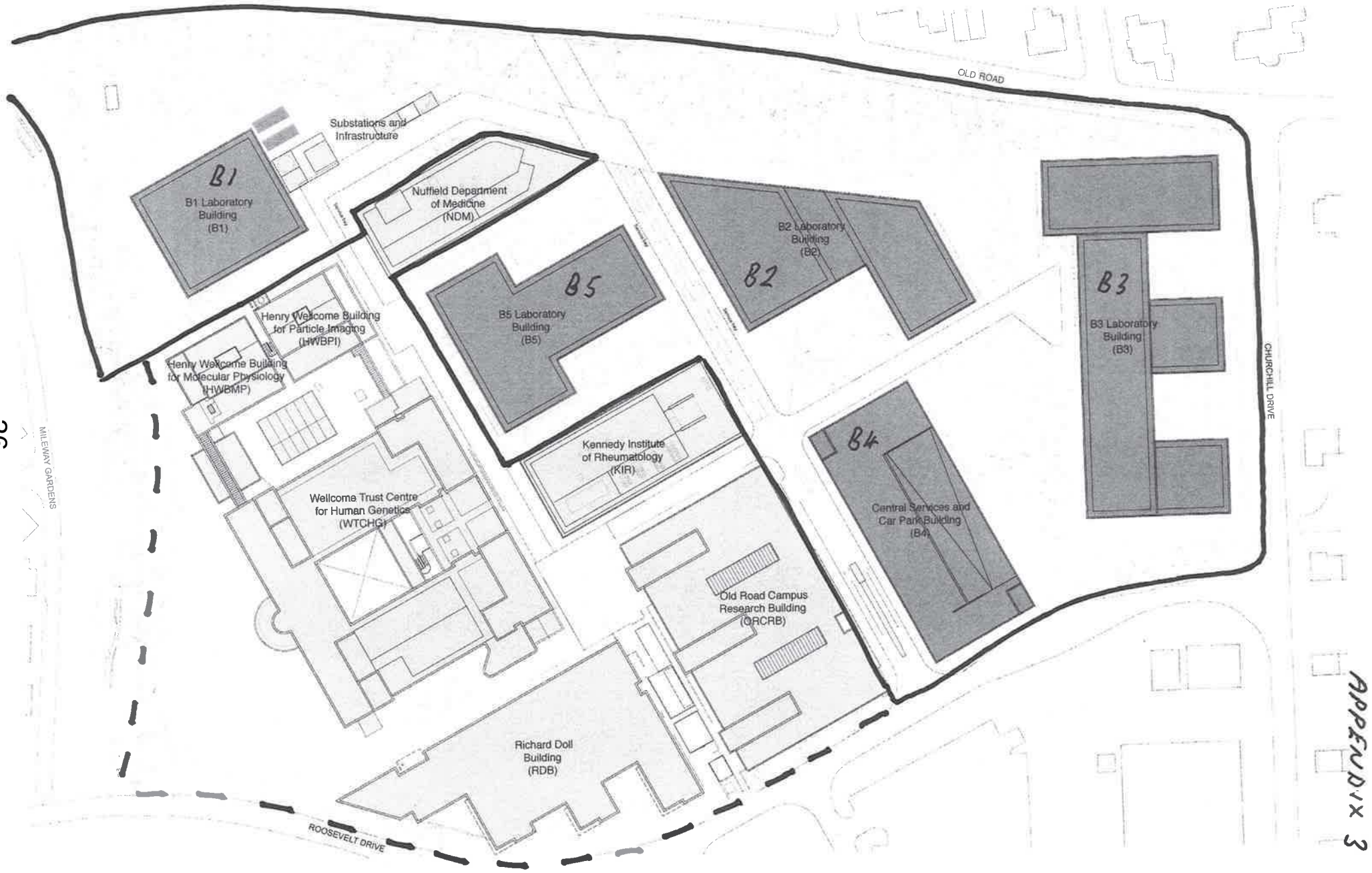
4.1.4



APPENDIX 2.

Proposals
Plot Layout

6.1.8



APPENDIX 3

APPENDIX 4

8.6

Fig.1 Illustrative Masterplan

Mitigation

15.59 Although changes in traffic flows in the immediate vicinity of the site are predicted to be largely neutral, a Travel Plan will be prepared for the development to ensure that these estimates are realised and maintained. The main elements of the Travel Plan are summarised below.

Generic Measures

- University Travel Webpage – The existing University Travel Page will be updated and expanded to include any new travel measures.
- Publicity - Additional promotion of both existing and new travel measures to staff will be undertaken using various methods.
- Video Conferencing Facilities - New facilities will be introduced into new buildings and information will be publicised to staff.
- Personalised Travel Planning - This new measure will offer staff personalised travel planning.
- Free Transport Home - This existing measure will be publicised further.
- Personal alarms for walkers/cyclists – This new measure will introduced and publicised.

Walking and Cycling Measures

- Organised "Walking Fitness" Groups - A new free measure that will be investigated by the Travel Plan Co-ordinator.
- Secure and Covered Cycle Parking - Additional high quality cycle parking will be implemented as part of the development.
- Staff Shower & Changing Facilities - Facilities will be incorporated into the design of new buildings.
- Staff Lockers - New facilities will be incorporated into the design of new buildings.
- Pilot Cycle Hire Scheme – OCC are committed to a cycle hire scheme and the development will include parallel facilities.
- Free Cycle Maintenance Service - This existing service will be reviewed to see if it can be expanded.
- Promotion of Cycling Initiatives - Cycling events will be promoted.

- Free Cycle Training - This existing measure will be promoted.
- Free Cycle Maps - These will be available to staff for free and placed in prominent locations.
- Interest Free Bicycle Loan Scheme - This existing scheme will be promoted at regular intervals in order to maximise uptake.
- Bicycle User Group (BUG) - The BUG will be promoted to increase interest in cycling and to consult staff on future initiatives.
- New Off-site Cycle Infrastructure - New infrastructure will be developed in accordance with OCC proposals and with input from the BUG.

Public Transport Measures

- Public Transport Season Ticket Loan - This existing scheme will have new and ongoing publicity to maximise demand.
- Discount Bus Pass Scheme - This existing scheme will have new and ongoing publicity to maximise demand.
- Discount Train Pass Scheme - This existing scheme will have new and ongoing publicity to i maximise demand.
- Bus Timetables and Maps - Additional timetables and maps will be included on the University Travel Page and placed in prominent locations within buildings.
- Rail Timetables - Rail information will be included on the University Travel Page and placed in prominent locations within buildings.
- University Operated Mini-bus Service - The feasibility of a new University operated mini-bus service to the campus will be investigated.
- University Operated Bus Service(s) - The feasibility of a new University operated bus service to the campus will be investigated.

Vehicle Demand Measures

- Parking Permits - The allocation and cost of existing parking permits will be reviewed.
- Car Sharing - The existing car share scheme will be promoted to staff at regular intervals.
- Controlled Parking Zones (CPZ) Extension - The University will support the extension to the existing CPZs in the vicinity of the site.
- Off-site Park and Ride – In the short and medium term, the use of the expanded Thornhill Park and Ride and its proposed enhanced bus services will be promoted. In the medium-longer term, as the development proceeds, the University will investigate other measures including dedicated bus services and additional P&R capacity.

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