COMMITTEE REPORT

BY THE DIRECTOR OF ENVIRONMENT AND NEIGHBOURHOOD SERVICES
READING BOROUGH COUNCIL **ITEM NO. 10**
PLANNING APPLICATIONS COMMITTEE: 26th April 2017

Ward: Whitley
App No.: 160199
App Type: HYBRID
Address: Land at Madejski Stadium, Shooters Way
Proposal: Outline application for residential development (Blocks 1-6 only) to provide up to 422 residential units, comprising predominantly 1 and 2 bedroom apartments (Use Class C3) along with associated landscaping and car parking and application for residential and mixed use development comprising: 196 residential units, convention centre and ice rink, 246 bedroom hotel and up to 102 serviced apartments, decked car parking within convention centre, flexible ancillary retail space, multi storey car park, public open space, associated access, landscaping, cycle parking, transport interchange and related infrastructure/engineering works, ancillary facilities, access and demolition of existing indoor training facility and enhancement of existing RFC Garden of Remembrance.
Applicant: Reading Prop Co.
Date valid: 4th February 2016
Major Application: 16 week target decision date: 26th May 2016
Agreed Extension of time date: 30th June 2017
Planning Guarantee: 26 week date: 4th August 2016

RECOMMENDATIONS

- Should the Sport England objection be sustained **RESOLVE** to consult the Secretary of State on the application and supporting papers in accordance with paragraphs 9 and 10 of the Town and Country Planning (Consultation) (England) Direction 2009 and **Delegate** to the Head of Planning, Development and Regulatory Services to **GRANT** Planning Permission, subject to conditions and informatives and subject to the satisfactory completion of a S.106 legal agreement, in the event that:

  i) the Secretary of State decides not to call in the application for determination; or
  ii) the period in which the Secretary of State may respond under paragraph 11 of the Town and Country Planning (Consultation) (England) Direction 2009 expires

or

- Should the Sport England objection be withdrawn **Delegate** to the Head of Planning, Development and Regulatory Services to **GRANT** Planning Permission subject to conditions and informatives and subject to the satisfactory completion of a S.106 legal agreement.

or

- **REFUSE** permission should the legal agreement not be completed by the 30th June 2017 unless a later date is agreed by the Head of Planning Development & Regulatory Services.

THE SECTION 106 LEGAL AGREEMENT TO SECURE THE FOLLOWING:

Phasing

- Details of delivery of certain elements of the overall scheme at defined points in time.

Transport:

- Bus priority measures - £1.12million.

- Car Club spaces as approved to be retained.
- Contribution towards Green Wave Bus.
- Free Match day travel details.
- Provision of bus lanes at the exit points to the site and enforcement measures (cameras).
- 100 P&R spaces to be retained.
- Events Management Plan.

Transport obligations from existing Stadium Expansion Section 106:

- RFC Matchday/ Event Travel Plan
- £350,000 to site related transport measures
- RFC Traffic Management contribution £100,000 to mitigate against any overspill parking that occurs as a result of the stadium expansion
- Car Sharing Scheme

Affordable Housing

- On- site 10% **or**
- Off-site financial contribution of £8.6 million

Employment Skills and Training

- Financial contribution to or preparation of Construction skills ESP
- Financial contribution to or preparation of End User ESP

Management re land gas remediation measure

- Management of areas to ensure continued integrity of land gas remediation/safety measures including alarms. Management company would need to demonstrate knowledge, experience and resources over the life of the development to manage and maintain safety at all times.
- Annual fee for assessment of monitoring and consequent actions – TBA

Leisure/Open Space/Public Realm

- Strategy for the management of the Royal Elm Gardens and Royal Elm Square to be agreed prior to first occupation. The open space to be managed in accordance with the agreement.
- £1.085 million – new play area and artificial turf pitch
- Ice Rink space to be available for use in certain parts of the year. Flexibility to cater for demands of other sports.
- Provision of suitable indoor training facility [Forest School] to be approved, linked to phasing.

Community Use

- The provision of D2 within part of the area identified as office space, which could include a health centre – commitment to explore options with South Reading Clinical Commissioning Group.

Serviced Apartments

- Control of use – limiting stay to no more than 3 months.

Sustainable Urban Drainage Systems

- Whole-life maintenance and management plan for the surface water drainage system.

CONDITIONS TO INCLUDE:

Time

1. Detailed part of the permission – time limit for commencement
2. Outline permission – time limit for commencement

3. Outline permission – time limit for submission of reserved matters

Phasing

1. Development to be in accordance with approved Phasing Plan

[pre-commencement and pre-occupation conditions- per phase basis]

Reserved Matters

1. Reserved Matters (layout, scale, appearance, landscaping and access) not approved by this scheme to be submitted
2. Prior to commencement of any part of each phase, plans and particulars in respect of all reserved matters relating to that phase, not set out in this outline application, to be submitted to and approved by the LPA. Each phase to be carried out in accordance with the approved details to show:
3. Layout (to include internal layout of buildings an car parking)
4. Scale
5. Appearance (to include short to medium views/'street scene')
6. Landscaping
7. Accesses to and within the development not already approved by this application

Drawings & Documents

1. Approved Drawings and documents**-** Detailed elements of the scheme noting that red lines on parameter plans are for EA purposes and do not represent maximum height or extent of development.
2. Reserved matters applications to accord with the principles of development as agreed at outline stage through approved parameter plans, Design and Access Statement, strategies etc

Construction

1. Construction Method Statement/Construction Environmental Management Plan to be submitted and approved prior to commencement of development (including demolition) to include:
    - Operatives and visitor parking
    - Construction vehicle movements route
    - Loading/unloading plant and materials
    - Storage of plant and materials
    - Security hoarding
    - Wheel washing facilities
    - Details of site zonation and working on a contaminated site, including ingress and Egress of the "hot zone" via a decontamination unit, with segregated areas for donning and doffing of contaminant resistant overalls and footwear, showers and washing facilities
    - Dust Management Strategy - measures to suppress dust and dirt.
    - Control of noise
    - Scheme for recycling of waste from construction programme
    - Details of construction hours
    - Timing of deliveries outside peak hours
    - Mitigation strategy – construction vehicles and risk from releasing sediments
    - No materials/ green waste to be burnt on site
    - Dust management strategy
    - Vegetation clearance on the banks to not take place between 1st March and 31st August
2. The hours of noisy construction, demolition and associated deliveries shall be restricted to the hours of 08:00hrs to 18:00hrs Mondays to Fridays, and 09:00hrs to 13:00hrs on Saturdays, and not at any time on Sundays and Bank or Statutory Holidays without prior approval from the Local Planning Authority.

Imported Materials

1. Details of imported fill to be used to be submitted to and approved by the LPA prior to construction

Groundwater Contamination

1. No development should take place until a monitoring plan to protect groundwater quality in the two aquifers below the site has been submitted and approved in writing by the Local Planning Authority.
2. No development approved by this planning permission shall take place until details of proposed trigger values for groundwater monitoring within the underlying aquifers are submitted to and approved in writing by the local planning authority. Each groundwater monitoring well will require an individual trigger value for specific determinants to be agreed. The time frame for submission of these proposed trigger values should be twelve months prior to commencement of construction.
3. Where the results of groundwater monitoring shows deterioration in water quality **above** trigger values concentrations previously agreed with the Environment Agency, the Action Plan (Table 7 of the Environmental Strategy Revision A, dated 27 June 2016) shall be implemented within one month of the results being received. The actions required to deal with deterioration in groundwater quality during all stages and phases of the development shall be implemented in accordance with the agreed scheme as set out in items 11.2.4 and 11.2.5 of the Environmental Strategy Revision A, dated 27 June 2016.
4. Prior to commencement the Environment Agency need to be satisfied that the groundwater dewatering system installed on this site is operational and fit for purpose. The Environment Agency will need to visually inspect the groundwater dewatering system prior to any development taking place on this site. The onsite inspection of the groundwater dewatering system shall be approved in writing by the Local Planning Authority in consultation with the Environment Agency.

Contamination and Land Gas – Outline Area

1. Site Characterisation
   Prior to submission of reserved matters in relation to each phase of development, the submission and approval of an assessment of the nature and extent of contamination. This assessment must be undertaken by a competent person, and shall assess any contamination on the site, whether or not it originates on the site. Moreover, it must include:
   (i) a survey of the extent, scale and nature of contamination;
   (ii) an assessment of the potential risks to:
   - human health,
   - property (existing or proposed) including buildings, crops, livestock, pets, woodland and service lines and pipes,
   - adjoining land,
   - ground water and surface water,
   - ecological systems,
   - archaeological sites and ancient monuments;
2. Submission of Remediation Scheme/Protection against land gas. The scheme must include all works to be undertaken, proposed objectives and criteria, an appraisal of and proposal of the preferred option(s), and a timetable of works and site management procedures.
3. Implementation of Approved Remediation Scheme.
4. Reporting of Unexpected Contamination.
5. Long Term Monitoring and Maintenance over a period of [x] years. Following completion, submission of reports that demonstrate the effectiveness of the monitoring and maintenance carried out to be submitted.
6. Submission and approval of a Land Gas Management Plan detailing how the continuous future management of the site will be undertaken, the operations and maintenance procedures that they propose the method of reporting and the level of experience of the

management company that will be employed.

7. Prior to commencement details of the proposed piling method to be submitted and approved. The Piling (for each phase of the development) shall thereafter be undertaken in accordance with the approved details.
8. Submission to and approval of location, management and maintenance of gas vents by LPA prior to commencement

Contamination and Land Gas- Detailed Area

1. Site Characterisation
   Prior to the commencement of development the submission and approval of an assessment of the nature and extent of contamination in relation to each phase of development. This assessment must be undertaken by a competent person, and shall assess any contamination/land gas on the site. Moreover, it must include:
   (i) a survey of the extent, scale and nature of contamination sufficient to characterise the site;
   (ii) an assessment of the potential risks to:
   - human health,
   - property (existing or proposed) including buildings, crops, livestock, pets, woodland and service lines and pipes,
   - adjoining land,
   - ground water and surface water,
   - ecological systems,
   - archaeological sites and ancient monuments;
2. Submission of Remediation Scheme
3. Submission of Remediation Scheme/Protection against land gas. The scheme must include all works to be undertaken, proposed objectives and criteria, an appraisal of and proposal of the preferred option(s), and a timetable of works and site management procedures.
4. Reporting of Unexpected Contamination
5. Long Term Monitoring and Maintenance over a period of [x] years. Following completion, submission of reports that demonstrate the effectiveness of the monitoring and maintenance carried out to be submitted.
6. Submission and approval of a Land Gas Management Plan detailing how the continuous future management of the site will be undertaken, the operations and maintenance procedures that they propose the method of reporting and the level of experience of the management company that will be employed.
7. Prior to commencement details of the proposed piling method to be submitted to and, including consultation with the Environment Agency be approved by the Local Planning Authority. The Piling (for each phase of the development) shall thereafter be undertaken in accordance with the approved details.
8 Submission to and approval of location, management and maintenance of gas vents by Local Planning Authority prior to commencement.

Surface Water Drainage

1. Development shall not begin until a surface water drainage strategy for the site, based on sustainable drainage principles and an assessment of the hydrological and hydro-geological context of the development, to ensure that soakaways are not constructed into contaminated land, has been submitted to and approved in writing by the local planning authority. The scheme shall subsequently be implemented in accordance with the approved details.
2. Development shall not begin until a "whole-life" maintenance plan for the site has been submitted to and approved in writing by the local planning authority. The plan should set out how and when to maintain the full drainage system (e.g. a maintenance schedule for each drainage/SuDS component) following construction, with details of who is to be responsible for carrying out the maintenance. The plan shall subsequently be implemented in accordance with the approved details.

Flood Risk

1. The development permitted by this planning permission shall only be carried out in accordance with the approved Flood Risk Assessment (FRA).

Foul Sewage

1. Prior to commencement, details of method of disposal of foul sewage submitted to and approved by LPA, to include ongoing management and maintenance.

Transport

1. Details of access routes for each phase to be submitted to and approved by LPA prior to the occupation of the phase.
2. Event Management Plans to be submitted to and approved to the LPA prior to occupation and reviewed and updated thereafter in the light of experience every year.
3. Public transport interchange to be provided prior to occupation of any phase.
4. No dwelling/ building to be occupied until highway access and lighting has been provided.
5. No dwelling/ building to be occupied until parking spaces provided.
6. Cycle parking to be provided prior to occupation.
7. Readybike location to be agreed prior to occupation.
8. Onsite location of Greenwave/Park and Ride bus stops to be approved prior to occupation.
9. Submission and approval of Travel Plans for construction and operational users (staff, residents, construction workers etc).
10. Submission and approval of Car Parking Management Plan for the whole site.
11. Management plan for bus and train ticketing (event and match day).

Access

1. Details of steps on southern bank linking to public right of way to be submitted and approved and installed in accordance with the approved plan prior to occupation of any phases.
2. Steps and ramp on northern side, adjacent to the proposed transport interchange to be installed prior to occupation and development and use of the transport interchange.

Design

1. Prior to submission of REMs the submission of a detailed Design Code to be approved by LPA, which REMs to adhere to – including:
    - Daylight/sunlight
    - Orientation and massing
    - Amenity space
    - Block massing
    - Views
    - Active frontage
    - Public and private realm
    - Pedestrian and vehicle access
    - Parking
    - Private amenity – communal courtyards, terraces and balconies, roof gardens
    - Sustainability measures – e.g. green roofs
    - Materials
2. Details submitted with each REM to include a Statement of Compliance with the approved Design Code and any plans approved to guide the REMs
3. Prior to construction of each phase details of external materials to be submitted to and approved by the LPA

Crime Prevention

1. Measures as set out in the approved Security Strategy plan and in accordance with principles of the Security and Counter Terrorism Strategy to be implemented prior to

occupation and use of external spaces.
2. Details to be submitted to and approved by the LPA in consultation with Thames Valley Police of measures to achieve Secured by Design accreditation (2016 Silver Award).

Wind

1. Prior to commencement submit proposals for establishing a baseline of existing conditions for the new development.
2. Prior to commencement of development for the detailed scheme to submit proposals for assessing wind conditions for each phase and proposed mitigation measures that will provide acceptable pedestrian comfort. Implement the scheme in accordance with the approved measures.
3. As part of the application for reserved matters on design, the submission of details assessing wind conditions for each phase and proposed mitigation measures that will provide acceptable pedestrian comfort. Implement the scheme in accordance with the approved measures.

Landscaping- Outline area

1. Pre-commencement submission and approval of hard & soft landscaping including biodiversity enhancements
2. Pre-commencement submission and approval of an Arboricultural Method Statement
3. Pre-commencement submission and approval of the location and specification of lighting
4. Prior to commencement an up-to-date tree survey, along with a schedule of tree works, shall be submitted and approved. No works other than those shown on the approved schedule shall be carried out without prior written consent from the LPA.
5. Pre-commencement submission and approval of tree pit specifications
6. Pre-occupation submission and approval of a schedule of landscape maintenance and aftercare covering a minimum of 10 years
7. Implementation of approved soft landscaping, including tree planting in accordance with the approved tree pit specifications, prior to occupation
8. Development in accordance with the approved Arboricultural Method Statement
9. Lighting as per approved plans/specifications
10. Landscape maintenance as per the approved details
11. Details of landscaping to be submitted at the REM stage to include landscaping; circulation areas; surfacing; materials; street furniture; schedules of plants; implementation programme; landscaping management plan; fencing/ walling; earthworks.

Landscaping- Detailed area

1. Implementation of approved landscaping schemes.
2. Details and implementation of tree planting.
3. Submission and approval of a landscape and ecological management plan, to include the Foudry Brook and the land between the developed area and the watercourse.
4. Details of boundary treatment for each phase.
5. Method for the removal of Himalayan Balsalm to be submitted and approved and undertaken in accordance with the approved plan.

Ecology

1. Submission and approval of Ecological Management Plan including management and maintenance.

Leisure/Open Space

1. Details of open spaces within residential areas including LEAPS and LAP to be submitted and approved prior to commencement of residential phases.
2. Public Realm [Royal Elm Square} to be in place prior to the occupation of any of the buildings.

Noise

1. Prior to commencement of phases with residential development the submission and approval of sound insulation measures from external noises and implementation in accordance with approved and retained thereafter.
2. Pre commencement of the convention centre submission and approval of sound insulation measures, informed by a noise assessment of the potential noise form the convention centre implementation in accordance with approved and retained thereafter.
3. No mechanical plant shall be installed until a noise assessment has been submitted to and approved by the LPA and installed in accordance with the approved assessment.

Sustainability

1. (i) The development as built, shall meet a minimum of BREEAM Very Good standard with a minimum score of 62.5 points.
   (ii) No part of the development shall be occupied until a post-construction review demonstrating compliance with a minimum BREEAM Very Good score of 62.5 points has been submitted and approved by the LPA.
2. Submission and approval of details of energy efficiency measures per phase, to be implemented in accordance with the approved details.

Floorspace

1. Overall floorspace of development to be in accordance with the approved parameter plan/ table of floor spaces for each use.

Mix

1. Housing mix to comply with principles established in the DAS
2. Retail mix to be in accordance with parameter plans

Management of site

1. Operational and Servicing Management Plan to be submitted to and approved by the LPA, prior to occupation to include, hours of use for all uses, for deliveries waste collection, hours of lighting for operational uses, suggested uses of Royal Elm Square.
2. Submission to and approval of an Emergency Plan by the LPA in consultation with the relevant Emergency Planning Lead organisation.

Waste Management

1. Submission and approval of waste management strategy in accordance with Reading Borough Council's Waste Management Strategy.

Lighting

1. Prior to the commencement of each phase a the submission and approval of a report detailing the lighting scheme and how this will not adversely impact upon wildlife and wildlife habitats has been submitted to and approved in writing by the LPA. To include lux contours.
2. Submission and approval of detailed plans to show locations and specifications in accordance with principles established in the submitted Lighting Strategy.

Extraction/ventilation

1. Details of extraction/ventilation systems for A use classes to be submitted to and approved by the LPA prior to occupation of these units.

Utilities

1. Prior to commencement of each phase a utility strategy to be submitted.

Signage/Wayfinding

1. Signage Strategy to be submitted to and approved by the LPA prior to the commencement of each phase.

Removal of PD rights

1. Removal of permitted development rights for dwellings.

INFORMATIVES TO INCLUDE:

1. Terms and conditions.
2. Building control approval.
3. Pre-Commencement conditions.
4. This development may require an Environmental Permit from the Environment Agency under the terms of the Environmental Permitting (England and Wales) (Amendment) (No. 2) Regulations 2016 for any proposed works or structures, in, under, over or within 8 metres of the top of the bank of designated 'main rivers'. An environmental permit is in addition to and a separate process from obtaining planning permission. Further details and guidance are available on the GOV.UK website: https://www.gov.uk/guidance/flood-risk-activities-environmental-permits.
5. EA advice notes –
6. Construction and demolition nuisance law.
7. Detailed design of residential blocks to allow for provision of relevant broadband infrastructure, especially in the context of deployment to multiple blocks.
8. Enforcement action under Housing Act 2004 if future daylight/sunlight provision does not meet required standards
9. Register with relevant provider's new build team so that infrastructure ducts are put in as part of the development
10. S106
11. Commercial Occupiers to sign up to Green Travel Plan
12. Construction Traffic to avoid specific areas
13. Safe marshalling route to be provided from Green Park Station on match days
14. Damage to highway
15. Positive and proactive.

1. INTRODUCTION

1.1 The application site is 15.47ha of elevated land adjacent to the existing Madejski Stadium (home to Reading Football Club 'RFC' and London Irish Rugby Club) associated car park, Academy Training Centre and training ground, along with the Millennium Madejski Hotel and Conference Centre, to the west of A33.

1.2 The site comprises a large car park which is used for car parking on match days and for Park and Ride at other times. There is also parking for Thames Water during the week. There is also the Garden of Remembrance (opened in 2011) and an indoor Academy Training Centre (the Dome) for public and private use, bus stops, internal roads and outdoor training pitches.

1.3 The site is approximatley 12m above ground level, on a capped former landfill site, with relatively steep landscape embankments adjacent to Green Park Business Park. The Foudry Brook forms the length of the north-western boundary. The western tip is adjacent to plot 550 of Green Park Business Park. To the south are the rear boundaries of 550 and 350 Lime Square (mixed use comprising WH Smith, Asda, Health Club, nursery, indoor playcentre and restarant), Costco and its associates parking. To the east is the existing Reading Gate Retail Park.

1.4 This original landfill site was made available for redevelopment by RBC in mid 1990s, following the construction of A33.

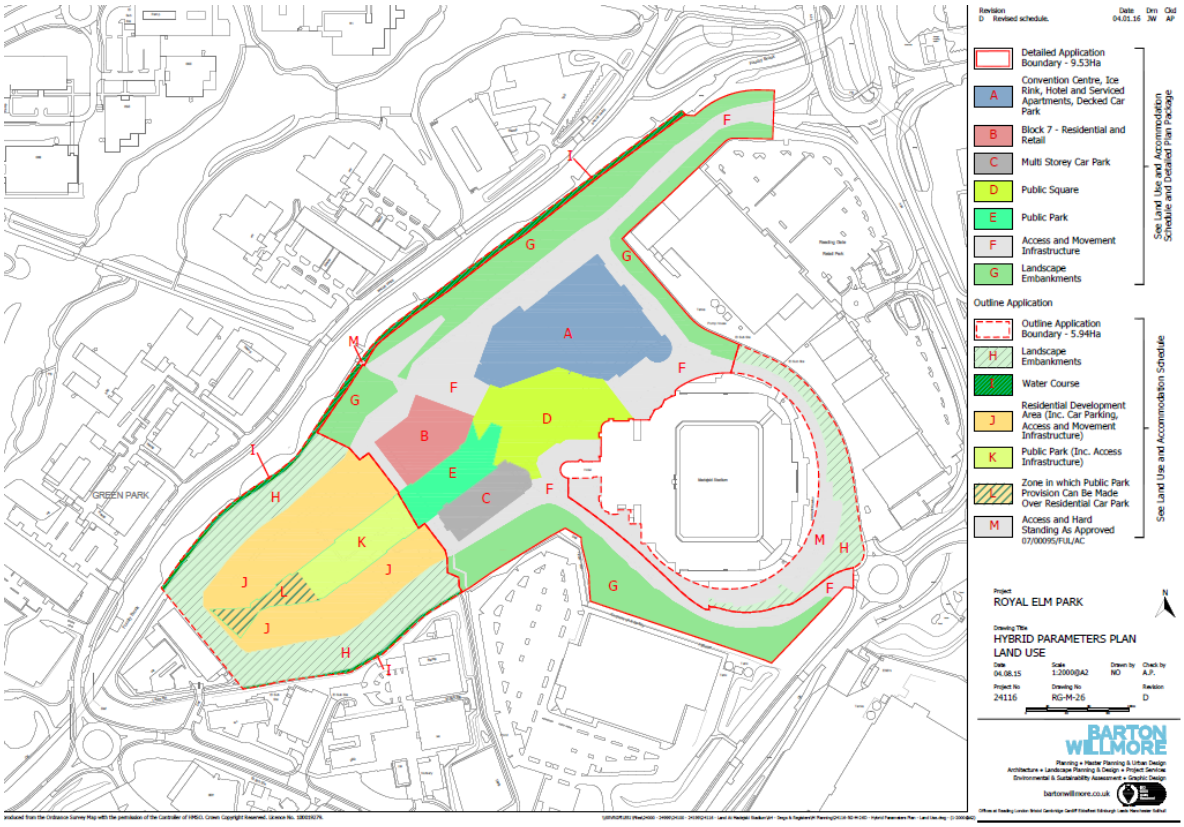
1.5 The application area excludes the Stadium, and hotel, and the area approved for the expansion of the Stadium. That permission has already been implemented so is an extant permission.

1.6 In terms of local planning policy the Site is within the Settlement Boundary and is located in Flood Zone 2. There are no national or local designations affecting the site or its surroundings. There is a Public Right of Way which extends through Green Park (west of the site) across Brook Drive and along the north-western and southern perimeters of the Site.

1.7 It should be noted that planning permission was granted by Wokingham Borough Council for a new football training facility (ref: F/2014/2199) at Bearwood Park, Sindlesham, to comprise full and junior sized pitches, café, changing block, gym and upon completion the RFC's existing training ground at the application site will be available for disposal. This is intended as a re-provision of the outside pitch which would be lost through this proposed scheme; this is not currently available for community use.

1.8 With regard to the loss of the indoor pitch within the 'Dome', which would result from this scheme, an application (Ref: 162885) is currently under consideration by Wokingham Borough Council (WBC) to relocate the pitch to Forest Boys' School in Winnersh, along with replacement pitches for that school. The final position on that scheme is awaited from Sport England.

1.9 The Royal Elm Park (160199) application is being referred to Planning Application Committee as it a major application.



Location Plan with Uses

1.10 There was a period of pre-application discussions from Summer 2015 onwards until submission in February 2016. Discussions with RBC officers, councillors and statutory consultees and the public consultation events, which were held across Reading during late 2015 and early 2016 are documented in the Statement of Community Engagement. The process of regular discussion has continued throughout the consideration of the application resulting in continuous refinement of the scheme.

2.0 PROPOSAL AND SUPPORTING INFORMATION

2.1 This is a hybrid application with part in outline and part as a full detailed application.

2.2 The amended detailed element (9.53ha) seeks permission for residential and mixed use development comprising (received 29th June 2016):

- **Block 7** – 196 residential units (two levels of parking of 164 car parking spaces (12 of which accessible) and 471.9m2 A1 shops.
  Mix of block 7 – 60 studio; 72 x 1 bed; 11 x 2 bed (3 persons); 49 x 2 bed (4 persons); 4 x 3 bed (5 persons).
- **Convention Centre and Ice Rink** (D1/D2) approx. 25, 831m2 GIA with decked parking (129 spaces) of approximately 4,981m2 GIA, loading bay, and retail space (A3/A4) approximately 1,456m2 GIA. Capacity for 6000 delegates designed to allow for large conferences, exhibition space and breakout rooms comprising exhibition hall/ ice rink – 2,500 delegates (potential for 3,500 through combination of sitting and standing) or 600 seated spectators; Main Ballroom – 2,100 delegates or 1,200 banquet style; mini-banquet – 1,400 delegates, or 740 for functions. The ice rink is dual purpose with the flexibility to convert to exhibition space. As an ice rink it is accessed from the public transport interchange frontage rather than from the public square to segregate convention centre delegates and users of the ice rink.
- **246 Bed hotel** (C1 – proposed 3*) with dining and health suite facilities (including a pool) and dedicated drop off/ pick up facility including lay-by for coaches.
- Up to **102 service apartments** in a mix of studio, one and two bed apartments (C1), approximately 23,605m2 GIA.
- **A1 uses** - will include a convenience store of 258 sq m gross and Class A1 comparison / service floorspace of 172 sq m gross in two units.
- **A3 / A4** floorspace will comprise 7 units - expected to be occupied by national operators.
- **Bridge link** from the Convention Centre to the Stadium.
- **Multi-storey car park** over six floors for 616 spaces – 581 spaces & 35 accessible spaces, 13 motorcycle spaces and 295 bicycle spaces 17,300m2. Allocated parking space within this for the existing and proposed hotels. The mutli-storey car park includes small scale office (over five floors on the north-eastern end) 1,972m2 (Planning Statement refers to potential for the ground and first floor office space to alternatively be used for a community/ healthcare facility) .
- **Public open space** including public square (Royal Elm Square – 8.684m2) and park (Royal Elm Gardens – 4,040m2) with street furniture, public art and directional signage. At the centre of the public square is a proposed spire - a landmark. The square is divided on two zones. A central gathering area accommodating large crowds and temporary events and outer edge with benches, trees, street furniture and terraces of cafes and restaurants.
- **Transport interchange** (Interchange Square) – marked by two LED sculptural boxes – 14 bus stops and lay-by for up to 20 buses.
- Access, landscaping, cycle parking, and related infrastructure and engineering works
- Retention of 172 surface level spaces.
- Millennium Hotel drop/off pick up retained and new hotel will have dedicated drop off/ pick up area.
- 208 covered cycle spaces across the site (in addition to those in the multi-storey car park) and each block with own cycle parking provision.
- Ancillary facilities for storage, management facilities and plant.

- Vehicular and pedestrian access.
- Demolition of existing indoor training facility.
- Enhancement of existing RFC Garden of Remembrance.

2.3 The amended outline element (5.93ha) seeks permission for (as received 29th June 2016):

Blocks 1-6 - up to 422 residential units (over 45,497m2) , predominantly 1 & 2 bed apartments with associated landscaping, parking (562 spaces), and part of park (Royal Elm Gardens – 6,340m2). All matters reserved apart from access to the site.

2.4 Potential mix is as follows:
Block 1: 2 studios, 2x 1 bed (2 persons); 21x 2 bed (3 persons); 32x 2 bed (4 persons); 3 x 4 bed (6 persons) – **total 60 units**
Block 2: 3 studios; 20 x 1 bed; 5 x 2 bed (3 persons); 3 x 2 bed (4 persons); 24 x 3 bed (5 persons); 3 x 4 bed (6 persons) – **total 58 units**
*Block 3***:** 8 studios; 15 x 1 bed; 14 x 2 bed (3 persons); 8 x 2 bed (4 persons) 5 x 3 bed (5 persons); 3 x 4 bed (6 persons) – **total 53 units**
Block 4: 2 studios; 27 x 1 bed; 2 x 2 bed (3 persons); 51 x 3 bed (5 persons); 1 x 4 bed (6 persons) – **total 83 units**
Block 5: 2 studios; 1 x 1 bed; 24 x 2 bed (3 persons); 52 x 2 bed (4 persons); 3 x 4 bed (6 persons) – **total 82 units**
Block 6: 2 studios; 1 x 1 bed; 26 x 2 bed (3 persons); 51 x 2 bed (4 persons); 6 x 4 bed (6 persons) – **total 86 units**

2.5 With regard to transport elements the two existing access points from the A33 would be retained, i.e. north of the site via Northern Way and south-east of the site via Hurst Way. A public transport interchange and taxi drop off hotel drop-off zones are located within the site of the detailed application.

2.6 The new internal road network would connect to the existing roads and would essentially split the site into two zones – one residential to the western part and the Stadium, Convention centre, Block 7 (residential, multi-storey car park and public square in the remainder adjacent to the Stadium. Apart from on event days this road would be two way. Access into the proposed service/ loading bay and conference centre car park for the convention centre/ ice rink would be from Hoops Way on the north-eastern side of the site. Access to the main multi-storey car park would be via Shooters Way. A total of 144 on street visitor spaces are proposed within the residential part of the scheme.

2.7 There is a proposed new and ramped access to replace the current steps to the north-west of the site connecting it to Green Park and adjacent cycle routes. There is also a proposed stepped access to link to the southern side of the site with the existing public rights of way which goes through the site between Costco and Lime Square.

2.8 Hybrid Parameter plans have been submitted for land use, movement, building heights, ground levels, proposed finished floor levels and boundaries, and these identify elements of the scheme proposed as fixed at this point, and provide the framework for the proposed development. The parameters of the outline component of the overall scheme provide greater flexibility. The applicant's intention is that future reserved matters applications would need to comply with the approved parameter plans.

2.9 An Environmental Statement (ES) and technical appendices were submitted, as referred to in Section 6 below, and results in summary are within each chapter (available to view online). All documents submitted as part of the application are

listed in Appendix 2. Plans and other supporting documents which were submitted are as detailed in Appendix 2.

3. PLANNING HISTORY

3.1

- 970432 – Proposed 146 Bedroom Hotel – Approved 10/11/1998
- 0101112 – Indoor Training Facility for RFC Football Academy and community use – Approved 11/3/2002
- 011498 – Extension of the hotel bedroom provision, conference and banqueting facilities, the provision of live-in staff facilities and the construction of a road realignment and retaining wall –Approved 6/3/2002
- 030737- Creation of additional office space at first floor level through erection of mezzanine floor and insertion of windows at first floor level – Approved 22/9/03
- 051351 – Extension to existing hotel to from new entrance and add 61 bedrooms – Approved 29/7/2005
- 060580 – Extension to provide a press media suite at first floor level and improvements to the existing players entrance at ground floor, modifications to access arrangements and existing cardboard compactor store – Approved 4/8/2006
- 070434 – the erection of extensions to the east, north and south stands of the existing Madejski Stadium to provide 12,400 additional seats to increase the overall number of seats to 36,900 enclosing approximately 31,349 square metres of new floor space, the re-alignment of shooters way and associated engineering works, and the alterations to the layout of the existing parking areas – Approved 24/01/2007
- 070388 – 5 storey extension to provide a press media suite at first floor level and improvements to the existing players entrance at ground floor, modifications to access arrangements and existing cardboard compactor store – approved 4/8/2007
- 070859 5 storey extension to provide a press media suite at first floor level and improvements to the existing players entrance at ground floor, modifications to access arrangements and existing cardboard compactor store (resubmission) – Approved 19/7/2007
- 080582 – Construction of new decked terrace area to existing stadium restaurant – Approved 19/5/2008
- 101623 – Application for extension of time limit for implementation of permission 07/00095/FUL [070434] for the erection of extensions to the east, north and south stands of the existing Madejski Stadium to provide 12,400 additional seats to increase the overall number of seats to 36,900 enclosing approximately 31,349 square metres of new floor space, the re-alignment of Shooters Way and associated engineering works, and the alterations to the layout of the existing parking areas – Approved 22/11/2010
- 121309 – Floodlight training pitch for Reading FC Academy – Approved 5/7/2012
- 130608 – Provision of new temporary classroom and mew changing rooms for academy facilities –Approved 21/6/2013
- 140145 – Lawful commencement of development approved under Application no: 10/00585/FUL and variation of condition number 130908 for commencement of works prior to 22/11/2013 – Approved 1/4/2014
- 150665 – Replacement of existing 17.5m tall mobile telecommunications monopole mast with anew 20m tall monopole mast, installation of 2no. new 300 mm dish antennas and 1 no. new equipment cabinet, and associated works – Approved 8/6/2015
- 151977/SCO – EAI Scoping Opinion Planning Application relating to Land at Madejski Stadium – Scoping Response sent 18/12/15 – and in summary was as follows: Confirmation that the topics and approach were appropriate and necessary, together with the request for specific information regarding: Vibration - Piling

during construction; consideration of Thames Water Comments regarding the impacts of vibration; Further information on waste to be able to determine that there would be no significant effects; Crime community provision, green space and retail to be included as receptors within the socio-economic topic – subsequently agreed that this could be addressed through the Planning Statement; socio-economic effects to be assessed in terms of their impact on the Borough as a whole and those parts of adjoining Boroughs; request for the removal of reference of up to 12 storey development.

4. CONSULTATIONS

4.1 It should be noted that several consultation responses were of a significant length. A summary of each response is provided in the body of the report. Copies of the full original responses received from the Environment Agency, RBC Transport, The South East Design Review Panel, The Reading Football Supporters' Society Limited (trading Supporters' Trust at Reading - STAR) and Wokingham Borough Council Transport, are copied within Appendix 3.

(i) Statutory

Environment Agency

4.2 Their initial response included two objections regarding 1) nature conservation and the river corridor and 2) Potential impacts on ground water quality. A summary of their response is as follows:

4.3 The assessment and mitigation of the risks to nature conservation are inadequate. The objection will be maintained until the applicant has supplied information to demonstrate that the risks posed by the development can be satisfactorily addressed. In particular, the proposals do not appear to have addressed the potential for additional shading of the Foudry Brook and its associated corridor, which could impact on the vegetation growing in this area.

4.4 The risks to groundwater from the development are unacceptable. The applicant has not supplied adequate information to demonstrate that the risks posed to groundwater can be satisfactorily managed. The site lies on a historic landfill over a secondary aquifer and there is the potential for contamination of this aquifer through pathways formed through the landfill from the development of this site. The use of building piling foundations and any infiltration for surface water disposal could potentially form pathways for pollution to the groundwater aquifer. Since the document that reflected the pre-application discussions has not been submitted with this current planning application we have no option than to object on the grounds that insufficient information has been supplied.

4.5 The site lies mostly within Flood Zone 2 with small parts within 3. Flood Zone 2 has a medium probability of flooding. The sequential test will need to be applied to the proposed development in accordance paragraph 103 of the National Planning Policy Framework (NPPF). There has been a sequential test submitted with this planning application. Please can you confirm to us in writing whether you consider the sequential test to be passed or not. Please confirm whether there are no other reasonably available sites at a lower risk of flooding.

4.6 The statutory responsibility to provide comments on surface water drainage proposals for major applications has passed to the relevant Lead Local Flood Authority (LLFA) from this date. In this case Reading Borough Council. Please consult the LLFA on the flood risk assessment requirements for surface water drainage.

4.7 Under the terms of the Water Resources Act 1991 and the Land Drainage Byelaws 1981, the prior written consent of the Environment Agency is required for any proposed works or structures in, under, over or within 8 metres of the brink of the Foudry Brook main river. In the second response received 26th May 2016) the EA maintained their objection regarding nature conservation and the river corridor.

4.8 Their final response (received 20/1/17) withdrew their objections and included a number of recommended conditions and informatives related to groundwater, flood risk and nature conservation and advice notes regarding the existing Environmental Permit which is the remit for the EA.

4.9 The also included an advice note regarding safe access and egress routes with respect to flood risk. This states that "The applicant should demonstrate that a safe access and egress route with a 'very low' hazard rating in accordance with the 'Framework and Guidance for Assessing and Managing Flood Risk for New Development' (FD2320/TR2) and the National Planning Policy Framework (NPPF) can be provided from the development to an area wholly outside of the 1% Annual Exceedance Probability (AEP) plus an appropriate allowance for climate change flood extent.

Historic England

4.10 On the basis of the information provided, we do not consider that it is necessary for this application to be notified to Historic England under the relevant statutory provisions.

Highways England

4.11 Technical Note: Conference Centre Scenarios and Travel Management (June 2016) has assessed the capacity of the proposed parking provision and public transport based on "An agreed average occupancy of 2 per vehicle" for each of the 5 conference scenarios. We have queried who agreed this occupancy rate with PBA and neither PBA nor yourselves have any record of this taking place. We request that further evidence is provided by the applicant to justify the seemingly high vehicle occupancy. Given the use of the site we currently do not find the occupancy rate a credible assumption. As a worst case scenario, we suggest that it is assumed that all trips are assumed to leave the conference within a peak hour period as there is more scope to be able to stagger the arrival time at a conference compared to a departure time.

4.12 Technical Note: Royal Elm Park Phasing Programme identifies each phase and what it consists of but there is no reference to the timing of each phase. We request clarification as to when each phase will be delivered (to establish if some phases will run concurrently). We are pleased to see that the first phases of the development are the delivery of the multi-storey car park and transport interchange plus supporting infrastructure. We seek an understanding of if these will be completed prior to the opening of the conference centre.

4.13 We note Wokingham Borough Council's comments in relation to the size of the buses used for the assessment of the public transport capacity as well as inconsistencies throughout the documentation in terms of the number of bus users for the same scenarios (i-Transport appears to have over-estimated the capacity of each bus). We anticipate that this will result in either an increase in the number of buses provided or an alternative modal split being proposed. Please can the relevant revised approach be confirmed and any subsequent revisions to the public transport strategy and other documents be provided for our consideration.

4.14 At present we have insufficient information to be able to confirm our formal recommendation in relation to the planning application.

4.15 A meeting was held in January 2017 between Highways England (HE), Peter Brett Associates and RBC. HE confirmed that they had no significant concerns, but would not provide their final comments until a final position was reached with RBC. *Officer note:* This will be reported in an update report.

Natural England

4.16 They had no comments and stated that: "The lack of comment from Natural England does not imply that there are no impacts on the natural environment, but only that the application is not likely to result in significant impacts on statutory designated nature conservation sites or landscapes. It is for the local planning authority to determine whether or not this application is consistent with national and local policies on the natural environment."

Network Rail

4.17 No comment

Sport England

4.18 Their initial response was an objection because it was not considered to accord with any of the exceptions to Sport England's Playing Fields Policy or with Paragraph 74 of the NPPF.

4.19 They stated at that time that "the application would result in the loss of playing pitch. For Sport England to be able to assess this application against the …. exceptions within Sport England's playing fields Policy, we require the following further information;

- Details of existing community users of the playing field/ level of activity; what clubs/teams use the playing field, how often etc.
- Details of the location where the Club intends to provide replacement training ground for football
- Details that demonstrate that alternative locations for development within the wider site have been considered and provide justification for not selecting the other sites
- Evidence of why development is needed; the application makes no reference to an up to date Sports Facility Strategy, Playing Pitch Strategy or other relevant needs assessment to justify the loss of playing field."

4.20 The applicant provided a direct response to the issues raised by Sport England (letter dated 29th June 2016). *Officer note:* At present the Sport England objection is maintained, however this is linked to their response to the planning application being considered by Wokingham Borough Council for the replacement indoor pitches ('Dome'). This is nearing resolution and the final outcome will be reported in an update report. Officer note: *If the Sport England objection is not withdrawn and the Council is minded to grant planning permission for the development then in accordance with The Town and Country Planning (Consultation) (England) Direction 2009, and the National Planning Policy Guidance the application should be referred to the Secretary of State with the Secretary of State having the option to call in the application and determine it. It is possible that the Secretary of State may decide not to call in the application for determination or may fail to respond to the Council's consultation within the 21 day period following receipt set out in the Direction. In these cases power to determine the application would revert back to the local planning authority.*

West Berkshire

4.21 They had no objections. However they stated that "… the Highways Authority has raised concerns with the current performance of the A33/Imperial Way junction and its potential to encourage drivers to seek alternative routes. Section 9.1.5 of the Transport Assessment (TA) assumes that all delegates arriving by rail will take a bus to the site. This would seem unrealistic as it common proactive for a proportion of delegated to take a taxi. For this reason it is suggested that a proportion of the convention centre trips to/from the station should include a taxi mode.

4.22 There also seems to be an inconsistency in section 12 of the TA with regard to delays at the A33/ Imperial Way junction at the AM peak. The other junctions demonstrate little difference in delay times when comparing scenario 1 and scenario 2. However this is not the case at this junction as scenario 1 has northbound delays of 30-40 seconds compared with approx. 70 seconds for scenario 2. We would welcome an explanation for this additional delay. It is also noted that there is a large delay predicted in section 12.2.12 of the TA for AM inbound traffic on the A33 northbound approach of 200 seconds. This reinforces concerns with the potential for traffic on the WB council network to seek an alternative route."

Wokingham Borough Council

4.23 Their initial objection (received 13th June 2016) was as follows: "… due to deficiencies within the Transport Assessment we are not able to determine the potential impacts upon our borough and therefore also unable to define what potential mitigation measures may be necessary." [Their full assessment of the 'Royal Elm Park Transport Assessment' is included in Appendix 3 below]. "…in summary, the following concerns are raised in respect of the transport assessment that has been submitted to support this application:

1. Lack of Saturday assessment
2. Bus capacity issues
3. SATURN cordon model not big enough
4. VISSUM model mention but missing from TA
5. Additional information on model inputs are required
6. Additional information on TRIC's sites and assumptions required. Capping the car trips to office by the number of parking spaces is not acceptable.
7. The assumptions on internal trips need to be reassessed as a trip from the hotel to convention centre cannot be treated only as an internal trip. The original trip to the hotel is an external trip and would need to be included.
8. Mode share information needs to be submitted
9. Available bus capacity should be used to ascertain impact on buses.
10. Car occupancy for the stadium would need to remain at 2.3 to ensure a worst case scenario.
11. Parking survey area was not big enough to correctly assess the level of parking off site for a stadium.
12. A sensitivity test for 2026 would need to be carried out.
13. Due to the size of the development WBC would have expected a bigger impact on the road network. This needs to be revisited."

4.24 With regard to the retail impact Wokingham BC stated "Considering the relatively small scale of the Class A1 retail floorspace being proposed, it is not considered that the proposed development would have a significant effect on the retail function of Wokingham's village, district and town centres."

4.25 Peter Brett Associates (appointed Transport consultant for the Applicant) had ongoing dialogue with Wokingham Council through emails, meetings and the

preparation of a number of technical notes (referred to in Appendix 2 below). Wokingham submitted further comments received on 20th July 2016, 31st August, 21st October and 24th October. The majority of the original issues raised were resolved; however WBC has an outstanding concern in terms of the transport modelling [Saturn] used (as at February 2017). However, the concerns raised by Wokingham are relatively consistent with the Council's transport concerns, therefore reference should be made to RBC's transport comments below within Sections 4 and 7. WBC's subsequent comments are not documented here, but they are available to view online.

(ii) Non-Statutory

Berkshire Archaeology

4.26 The DBA submitted with this application demonstrates that the site is located over substantial made ground. Therefore no archaeological work will be required in this instance.

Berkshire Local Enterprise Partnership (LEP)

4.27 A summary of the LEP response is as follows. The Thames Valley Berkshire Strategic Economic Plan (SEP) makes provision in its Implementation Plan for a "world class business/conference centre" and sees this as a channel to impact for the SEP International Programme. Over a period of six months ahead of submitting the SEP to central government in 2014, the LEP completed a major business survey (undertaken independently). Particular feedback from this survey focused on the need for "*…urgent infrastructure enhancements in and around Reading…*". Our SEP responded by prioritising interventions that enhance connectivity within and between our towns, including Mass Rapid Transit. The South Reading Mass Rapid Transit is a complex and ambitious scheme, which can be delivered in a number of phases. It is critical enabling infrastructure for Reading and indeed for developments such as that proposed at the Madejski Stadium. The South Reading Mass Rapid Transit secured in excess of £5m Local Growth Funds (LGF) for its first two phases, through the Thames Valley Berkshire Growth Deal. The subsequent phases will form part of the LEP's bid for further LGF ('Growth Deal 3'), having been prioritised by the Berkshire Strategic Transport Forum: over £10m will be sought for phases 3 & 4, and a further >£10m for phases 5 & 6."

BRE- Daylight, Sunlight and Overshadowing

4.28 The British Research Establishment (BRE) was commissioned by RBC to review the daylight and sunlight aspects of the submission. The advice they provided is referred to in the appraisal in section 7 below.

BRE – Wind

4.29 The BRE was also commissioned by RBC to undertake a review of the wind-related information provided by the Applicant. The advice they provided is referred to in the appraisal in section 7 below.

Ecology- RBC

4.30 The original comments (received 23/6/16) stated "I share the EA's concerns about the impact of the proposed scheme on the Foudry Brook and will wait for the applicant's response before providing my formal comments." Further to the EA's response (received 20th January 2017) the Ecologist confirmed that subject to the conditions in the EA's letter that there were no objections on ecology grounds (rec 24/2/17)

Economic and Cultural Development - RBC

4.31 The Head of Economic and Cultural Development stated (in summary) that "The aims and objectives of the Cultural Partnership and implementation of the strategy

are mentioned. The role as a cultural hub directly aligns with one of the aims of the strategy: recognising the need for cultural hubs and new cultural spaces and will also contribute to the sense of place. The proposal will contribute to the strategy's vision of raising the profile and recognition *"...for cultural and heritage excellence at a regional, national and international level.. "* It will contribute and strengthen the visitor economy - another aim of the strategy and enhance Reading's role as capital of the Thames Valley (priority one)."

4.32 "The Implementation Plan for the LEP's Strategic Economic Plan includes a commitment to: *'Make provision for a world class business/conference centre: This will be a catalyst to business tourism (linking to our wider Visitor Economy initiative which is identified as a longer term priority) and it will provide a particular resource for our larger corporates. We expect the private sector to deliver the facility, but we intend to initiate some of the preliminary feasibility and design work to test the market and make headway.'* The Plan does not specify or indicate a location for this conference centre but the proposals for Madejski with excellent transport links and accessibility to Heathrow make it an ideal location to deliver on this aspect of the LEP's strategy. More parochially such provision would also enhance Reading's economic strength and primacy within the sub-region and accord with growth policies for the A33 corridor."

4.33 "There is scope for the facility to compete in some respects with the current business at the Hexagon and the Town Hall, although we believe that to a large extent they will be operating in a different market with limited overlap. On balance the new facility is welcomed as it may also increase the profile and prominence of Reading as a destination to the benefit of existing venues."

Education - RBC

4.34 Based on the Pupil Product Ratios of 0.3 per dwelling for Primary and 0.16 per dwelling for Secondary, the proposed scheme would need to provide 220 Primary school places and 118 secondary school places .

4.35 As discussed the impact of these numbers will require the construction of either a 1FE extension (210) to an existing primary school or a new 1 FE primary school. At secondary level we are talking about a 1FE extension (150) to an existing school in South Reading.

Environmental Protection and Nuisance – Private Sector Housing – RBC

4.36 The Officer confirmed that the Council has a duty under Part I of the Housing Act 2004 to keep housing conditions within the Borough under review and to investigate where there is evidence to suggest a hazard to the health or safety of occupiers may exist. The assessment of hazards within residential accommodation is made by reference to the Housing Health and Safety Rating System (HHSRS), which is the system prescribed by law for this purpose…..If the hazard is found to be category 1, the Council has a duty to take action to ensure that residents and/or visitors are protected from the effects of the hazard.

4.37 The comments focus on block 7 [within the detailed part of the proposal], which is intended for long-term residential use (as opposed to the serviced apartments in the proposed convention centre).

4.38 *Fire* - …Inability to escape from the dwelling is one of the factors listed by the HHSRS Operating Guidance as likely to increase the severity of the outcomes of a fire. *Drawing PL-76*: one of the proposed units on the northern side is described as a studio flat. Given the proposed layout, I believe this unit could more reasonably be described as a one bedroom self-contained flat as the bedroom would essentially be a separate room. This would mean there is no safe means of escape from the

bedroom in the event of a fire. The layout of this unit will therefore need to be reconsidered. A similar problem exists in one of the dwellings in the northwest limb of the second floor of the proposed development *(see drawing PL-72).* On the following drawings, the entrance door is missing from one of the proposed flats and there I cannot assess the fire escape route: *PL-75i*; *PL-75*; *PL-74i; PL-74*; *PL-73*; and *PL-72*.

4.39 *Spatial arrangement* - Where there are lounges/kitchens stacked above bedrooms, there is an increased likelihood of complaints of nuisance noise and sleep disturbance. These layouts should ideally be changed or sound insulation installed to mitigate. Unfortunately, as the individual units are not labelled on the above drawings, I cannot provide further details.

4.40 *Light* - One of the prescribed HHSRS hazards is titled 'Light'. The following relevant matters that will affect the likelihood of harm occurring and the likely outcomes:

a) Obstruction – of windows by buildings or other features.

b) Size, shape and position – inadequate size, inappropriate shape and/or position of windows preventing reasonable penetration of daylight into room.

e) Glare etc – artificial causing glare lighting, shadows and/or obvious flicker.

4.41 As part of this application, the applicant has submitted Average Daylight Factors (ADFs) for a sample of rooms within the proposed block 7. Both BS 8206 and BRE Report 209 provide the following minimum ADF values for different room uses:

- Bedrooms, 1 %;
- Living rooms, 1.5 %;
- Kitchens, 2 %.

4.42 Appendix C of BRE Report 209 states that these are minimum values that should be achieved. BS 8206 notes that:

Where one room serves more than one purpose, the minimum average daylight factor should be that for the room type with the highest value. For example, in a space which combines a living room and a kitchen the minimum average daylight factor should be 2 %.

4.43 The results of the sampling exercise and calculations were published in Appendix 14.2 [of the ES] submitted by the applicant. The results show that the ADF for a number of the rooms will fall below the thresholds outlined above. I would make the following comments:

- Lounge/dining rooms/kitchens should have an ADF of at least 1.5 %. The shortfall on natural lighting to kitchen areas should be addressed by the use of supplementary artificial lighting;
- Studio flats should have an ADF of at least 1.5 %. The shortfall on natural lighting to kitchen areas should be addressed by the use of supplementary artificial lighting;
- In dwellings with more than one bedroom, it is likely that one or more residents will spend extended periods in their bedrooms for privacy. If access to daylight is poor, these residents are at increased likelihood of suffering ill-health. The

ADF for bedrooms in dwellings with two or more bedrooms should therefore be at least 1 %.

4.44 *Falls* - Many of the proposed dwellings at first floor level appear to have gates in the guarding protecting the balcony outside. I do not understand the purpose of these gates and they would appear to introduce an unnecessary fall hazard that would be actionable by the Council under Part I of the Housing Act 2004. If these gates serve no fire safety purpose and have no safe egress to ground level, they should be omitted.

4.45 In their second response (July 2016) the EP Officer stated that they would be willing to accept the following levels [of Average Daylight Factor], although noted the comments from BRE that on a relatively unconstrained sites there should better compliance with the levels recommended for daylight and sunlight provision, and suggested that the Applicant should justify why this was not the case.

- Kitchen/living/dining rooms having an ADF of 1.5 % (departure from 2 % recommendation for kitchens), is justifiable as kitchens are not habitable spaces and can be lit with artificial lighting;
- Studio flats having an ADF of 1.5. This would then meet the recommendations for living rooms (where residents would normally spend a lot of their time);
- ADF in a bedrooms falls should not fall below the 1 % recommendation

4.46 Following a further response from the applicant (2/8/16 Malcom Hollis) the Officer had no objection subject to an informative about possible future complications/enforcement action under the Housing Act 2004 if light subsequently turns out to be defective.

Environmental Protection and Nuisance – Land Contamination

4.47 The original response from the Environmental Protection and Nuisance Team below was supported by technical advice from an external consultant TEC Consulting. The full response from the consultant is included in Appendix 3.

4.48 The Officer stated that "Based on the complexities of the site due to the existing landfill material and the monitoring showing very high concentrations of ground gas having also been recorded with levels over 70%/volume of methane within boreholes immediately north of the football stadium; we have sought external opinion. The levels of total ammonia Cal nitrogen show that the landfill is still active. Gas data included within the application is not specific to the site; there are no flow rates provided. Monitoring has not been carried out from within the fill material across the development area. I do not believe adequate information has been submitted to demonstrate that it is a very low risk gassing site or that waste is nearing stabilisation both physically and biologically.

4.49 Based on the report submitted by TEC it is my opinion that the application should be refused. I do not believe there is enough evidence provided to show that the site is suitable for its proposed residential end use."

4.50 Additional data was requested from the applicant and further to meetings, additional monitoring data and technical notes RBC's consultant provided a further response "I would consider that both the coverage of boreholes now provided by the applicant and the extent of monitoring undertaken (including the low and falling period of atmospheric pressure) is the minimum that would be required at this pre-application stage and provides a general overview of the higher risk that would be expected to be associated with a site such as this. Any permission that

you may feel minded to grant is going to have to have conditions applied to require substantial additional investigation, monitoring (over a suitable period) and assessment of the gassing regime to confirm these initial findings."

Environmental Protection & Nuisance – Noise and Air Quality

4.51 *Noise impact on development* - The submitted noise assessment has considered existing noise levels and assessed them against the recommendations for internal noise levels within dwellings and external noise levels within gardens / balconies in accordance with BS 8233:2014 and WHO guidelines for Community Noise. The assessment has identified that additional mitigation will be required to ensure that rooms meets the requirements of BS8233:2014 at night.

4.52 Given that the acoustic integrity would be compromised should the windows be opened, ventilation details must also be provided, where mitigation relies on closed windows. Ventilation measures should be selected which do not allow unacceptable noise ingress and should provide sufficient ventilation to avoid the need to open windows in hot weather, however non-openable windows are not considered an acceptable solution due to the impact on living standards. A condition is recommended for an assessment of the current noise environment, for protecting the dwellings from the external noise environment of the area has been submitted to and approved, in writing, by the Local Planning Authority

4.53 *Sound Insulation – Convention Centre* - The noise assessment carried out as part of the environmental statement has looked at noise from a number of existing sources it has not considered the potential impact the proposed convention centre will have. Because of the intended mixed use of the convention centre including 'entertainment events' I have concerns about the potential for noise disturbance from this source having an adverse impact on future residents. The focus should be on preventing noise breakout from the convention centre by incorporating suitable levels of sound insulation. This may avoid restrictions on the potential uses the venue can accommodate in the future.

4.54 In order to ensure that future residents are protected from noise from the convention centre and to avoid future restrictions on the potential uses of the venue it is recommended that a further assessment addressing concerns about noise breakout from the convention centre is submitted before the full application is determined. If this is not possible a condition is recommended regarding a scheme of sound insulation to be submitted and approved.

4.55 *Noise Generating Development* - Applications which include noise generating plant when there are nearby noise sensitive receptors should be accompanied by an acoustic assessment carried out in accordance with BS4142:2014 methodology.

4.56 The noise assessment submitted recommended plant achieve 45dBLAeq1hr, however, Reading Borough Council has a policy requiring -10dB below the existing background level. Because the existing background level is relatively high and the application is at early stage it should be possible to choose the plant and design the scheme to meet the criteria set out below.

4.57 The noise assessment needs to establish the predicted noise rating level taking account of any characteristic factors like tonality or impulsiveness of the noise. The rating level should be compared with the background noise level.

4.58 Within Reading there is strong justification for requiring the plant noise rating level to be at least -10dB below the measured background level. Specifically to prevent cumulative impact from addition of plant over time which could result in background creeping up to levels which might cause adverse health impact, which

is more likely in a densely occupied town such as Reading. Levels of -10dB ensure that the background level is not increased and nuisance is unlikely.

4.59 However, there may be some situations where this cannot be achieved there may be some flexibility where this is justifiable for example where there are very low background noise levels, etc. Reasons should be clearly stated within the assessment conclusion. The assessment report should include any mitigation measures required in order to meet our criteria.

4.60 It is recommended that the assessment is submitted prior to the determination of the application. If this is not possible a condition is recommended requiring a noise assessment of the proposed mechanical plant to be submitted and approved.

4.61 *Air Quality - Increased exposure* - The air quality assessment submitted with the application shows that on the development site itself pollution levels (NO2 and PM10) will be well below national objective levels set for the protection of human health. Therefore no mitigation is proposed.

4.62 On the A33 the extra traffic resulting from them development has been modelled and shows that the development will have no significant impact on NO2 or PM10. Therefore no mitigation has been proposed.

4.63 During the demolition and construction phase the assessment has shown that there may be some impact from the development. The assessment recommends that the developers follow Institute of Air Quality Management guidance to draw up a Dust Management Plan to ensure that these potential impacts are controlled. A condition is recommended for the submission and approval of a Dust Management Plan.

4.64 Conditions are recommended regarding the control of noise and dust during construction and no burning of waste.

Housing Strategy – RBC

4.65 The officer stated that the developer has commissioned and submitted a scheme financial appraisal of the scheme to test scheme viability with various levels of affordable housing on site.

4.66 Tenure should reflect, as far as is possible, current affordable housing policy of 70% rent and 30% shared ownership.

4.67 The location of the proposed affordable units and tenure mix will be subject to agreement at Reserved Matters stage. Future reserved matters applications will be submitted giving due consideration to the Council's guidance within Policy CS16 and the Affordable Housing SPD.

- Currently, the housing need analysis of Reading shows an almost overwhelming need for smaller, 1 and 2 bedroomed rented property but Reading will still require some larger property types and sizes.

- Rental levels to be considered are to be set thus:-1 and 2 bed property should be let at 80% of market rent or no more than the Local Housing allowance (including service charge), whichever is the lower amount.

- Any 3 bed and above should be let at Target rent levels.

Officer note: Details of the affordable housing offer are set out in part (x) of section 7 below.

4.68 The design/construction of the affordable housing (From 4.25 of the RBC Affordable Housing SPD) should be in keeping with the character, appearance and quality of any market sale housing on the development. The Council expects new affordable housing to meet the Homes and Communities Agency (HCA) Design and Housing Quality Indicators (HQI). These standards cover areas including unit floor space and room sizes, appropriate amenity space, car parking provision, wheelchair and disabled access, standards of finish and furniture, sustainability, and Building for Life, etc. Units to be transferred to a registered provider should, as a minimum, meet the HCA HQI standards 12, as well as the Council's planning requirements, in particular Core Strategy policies CS1, CS7, DM4, 5, and 10. HQI standards will generally need to be provided for a scheme if it is to be considered in the HCA National Affordable Housing Programme (NAHP).

ICT Technology and Communications - RBC

4.69 The Officer confirmed being broadly happy from a Berkshire Superfast Broadband perspective. The Officer advises that the applicant will need to register with the Virgin Media new build team so the infrastructure ducts are put in as part of the development (usually free) which they have registered for, as it is costly to reverse engineer afterwards.

4.70 The Office states that "BT infrastructure is simply a case of distance from the nearest upgraded cabinets which we have already achieved in south Reading area. We have worked with Hyperoptic who specialise in installations into high rise multiple flats. The applicant named the supplier, so they are obviously aware of them, although appear not to be proposing using because of BT and Virgin Medias presence. The only other comment I would make is we also have worked with WarwickNet who specialise in connecting Business Park developments at their own cost - so that is another supplier who may be interested in an business related element, - and have worked in South Reading - Acre business park etc.

4.71 Consumers will have a choice of BT/VM and probably wireless providers who are moving into the area. On-going designs need to allow for the infrastructure deployment to multiple tower flats for local distribution."

Leisure and Recreation Services – RBC

4.72 Their initial response (26/2/16) is summarised as follows: The proposed public square is welcomed and provides a high quality focal point within the development**.**

4.73 The remaining public open space (Royal Elm Gardens) is poor and too small to adequately serve the needs of the residents. The first 100m of the gardens appear overall to have an urban look with little appeal. It is questionable if this area is 0.4 ha in size. A road, is included as part of the "gardens". Other illustrations of the same area show that Royal Elm Square extends past the multi storey car park, further reducing the size of the gardens. The two banks of verdant planting restrict the actual amount of useable open space as do the wide pathways shown in the landscape masterplan. It is an area that essentially provides a pedestrian through route rather than offering recreational activity.

4.74 There is no information about the proposed LEAP and LAPs other than their location. Initial thoughts are that there appears to be inadequate buffers around these. In the absence of information therefore, it is not possible to make comment. However, from the illustrations, the location of the LEAP is buried deep within the development. It would serve a wider audience if it were relocated closer to Royal Elm Square and where it would have better natural surveillance. It would also reduce the likelihood of disturbance to nearby residents. A minimum of

400m2 would be required for the LEAP and all the criteria associated with a LEAP should be applied.

4.75 It is noted that the Design and Access Statement (page 241) states that the Royal Elm Park is 10,985m2, the equivalent of 1.09 ha. However this includes the wide roadway which severs the first section of the gardens from the remaining open space and an undefined area at the south west corner of the development. Clarity is therefore requested on the actual size of the green space proposed.

4.76 Accepting that new provision is required in this instance, as there is in excess of 50 residential units, our view is that these outline proposals do not provide sufficient open space for a development of this size.

4.77 The Open Spaces Strategy details the rationale behind the Council's standards of provision. In terms of new public open space the Open Spaces Strategy says it must be: In the case of very large developments, the provision of a new local park (minimum area of 1.0-2.0 ha) should be required; Integrated, not overly fragmented, open space (in terms of both area and topography); Linked to adjacent local communities (not buried within the new development); Accessible to the general public and to people of all capabilities; Not severed by roads; At least in part, informal landscaping for both aesthetic and recreational purposes; Appropriate, in that it satisfies the most urgent local need, whether formal children's play provision; youth facilities; sports grounds; green links; or informal landscaping

4.78 Historically, the Council adopted the National Playing Fields Association's Six Acre Standard (now Fields in Trust) which provided the benchmark for setting aside sufficient land to enable people of all ages, especially the young, to participate in outdoor physical recreation. Fields in Trust recommends that for 1000 residents or more there should be full provision of LAPs, LEAPs, local landscaped areas for play and NEAPs. There is only one LEAP and no local landscaped areas for play and no NEAP proposed within this development.

4.79 Overall, it is disappointing to see that a development of this size is proposing LAPs, which are to be contained within private courtyards for residential use only, and a single LEAP. There is nothing in terms of outdoor sport and recreation. There is nowhere for people to jog, walk a dog, play football, fly a kite, throw a Frisbee etc. In fact, there are no outdoor sporting opportunities available on site for youths or employees.

4.80 This shortfall in provision is unacceptable in planning terms. Unless more open space is provided on site, to mitigate the impact of the proposal we would be seeking a significant off-site contribution.

4.81 Following amended information and further clarification (set out in the DAS Addendum June 2016) Leisure provided a second response summarised as follows: "..we appreciate their feedback from the research undertaken in providing evidence of the potential socio-economic composition of the new development. Drawing comparisons to nearby Kennet Island reaffirms the likely profile of the residents of the Madejski development. It also highlights the importance of having access to local recreational and sporting opportunities.

4.82 ...enhancements will need to take place to cater for this additional use. Their [Barton Willmore] comments do not however, address our concerns regarding the shortfall in open space. The Council's Open Spaces Strategy states that in the case of very large developments (such as this), the provision of a new local park – minimum area of 1.0-2.0 ha – is required. This provides play, multi-

functional and recreational spaces and activities. The scope of 1.0 to 2.0 ha reflects the different requirements and opportunities in Reading for both high and medium density housing. A minimum of 1.0 ha is required.

4.83 The area identified as Royal Elm Park includes access roads which fragment the space reducing its value and introduces some conflicts between pedestrian and vehicular users. The DAS Addendum identifies only 6289m^2 of play and multi-functional space. This includes a section of open space to the north east of the park which falls outside the park boundary (see Public Square and Royal Elm Park Interface below).

4.84 The development makes provision for play for the younger age groups but there is little provision for older children and no outdoor sports facilities for either local residents and workers or those displaced by the loss of existing facilities.

4.85 At Paragraph 4.2 the [Planning Obligations under S106] SPD advises that the Council will seek to address site specific impacts outside of the remit of CIL, provided associated contributions are clearly linked to the development and are needed to make a development acceptable. To address this site specific impact, and to make the scheme acceptable in planning terms, a financial contribution is therefore required.

4.86 The revised landscape proposals identify an attempt to address the need to create a welcoming and defensible entrance into the Royal Elm Park. Option 2 identifies the provision of a hidden timber fence. Effective controls along the pedestrian ways needs to be identified. This needs to be both making a statement and allowing control of access. The hidden timber fence effectively demarks the open space associated with the square and the residential local park.

4.87 Play areas: With regards to the LAP within the communal area of Block 7, we are still unable to comment as no detail has yet been provided. Our observation is that given the size of Block 7, the LAP is too small to adequately serve the occupants of these flats. The very nature of its location (as with the other LAP's) is that it will cause nuisance/noise disturbance to residents. It is also likely to attract youths in the evening with there being no control over behaviour. As a minimum, appropriate access control needs to be in place.

4.88 Similarly no detail is available on the LAP's within Blocks 1-6, nor the LEAP but we accept that this is at outline stage at present.

4.89 The research undertaken on the socio-economic composition indicates that there will be high proportions of children under 5 living in the Madejski Stadium development. The provision of LAPS within courtyards should be supplemented by formal equipment within the main park to allow parents to take siblings of mixed ages to play in either adjacent or mixed spaces.

4.90 The LEAP identified is required to accommodate the anticipated 200 children (4-10 years), however disturbance to local residents needs to be controlled.

4.91 Memorial Garden: To safeguard users of the Memorial Garden at least two entrances/exits need to be provided.

4.92 Loss of playing pitches: The Council share some concerns expressed by Sport England. The increased population will increase the demand for sports pitches. The lack of open space capable of sustaining ball games will increase the need and demand for sports pitches.

4.93 The proposal identifies the loss of two artificial turf pitches capable of supporting intensive use. One of these has significant community use which has not been identified within the Design and Access Statement Addendum.

4.94 Information provided by Reading Football Club, regarding the current use of the indoor football pitch facility (the Dome), is misleading and does not accurately reflect what is taking place on a weekly basis. There are a number of community bookings including football leagues that run at times that the facility is identified as unavailable to the community.

4.95 Similarly, the availability of pitches to cater for both displaced and new demand for football is significantly less than that identified within the two mile radius:

- Blessed Hugh Faringdon Catholic School is listed as offering 2 x full sized football pitches with changing rooms and disabled access, when in fact they offer only 1 x full sized pitch, with no access to changing rooms.
- Southcote Primary School is listed as offering 2 x junior pitches. Only 1 x junior pitch is offered at this school.
- Ryeish Green School closed in July 2010 and re-opened as Oakbank free school in September 2012. Both the school and Wokingham Borough Council have confirmed that they do not provide any pitch bookings at this site.
- The three sites listed as pay to play Reading Borough Council pitches have lease/management agreements in place with local community groups and a junior football league. Consequently, they do not have the capacity to accommodate the displaced users nor any new demand arising from the development.

4.96 There is a need to provide artificial pitches in the locality to cater for both the displaced activity and new demand generated. This needs to serve the same catchment as the existing and therefore needs to be as close as possible to the development.

4.97 The closure of the Dome will result in all community use being displaced with no alternative provision being identified. School use identified within the application will also be displaced with no available alternative. The school sites identified have limited carrying capacity and are only available at weekends. This excludes them from providing practical alternative accommodation.

4.98 Whilst we understand that Reading Football Club intends to relocate the indoor training pitch to The Forest School. Re-provision of facilities there will not effectively serve the local demand of both school and community. It is unclear whether there is existing use and unmet demand at The Forest School that would exclude use by those travelling from Reading even if they were willing to do so.

4.99 We note that the full sized floodlit artificial pitch (used solely for Reading Football Academy use) is to be relocated to the Club's new training and academy facility at Bearwood Park, Sindlesham.

4.100 Local planning policies along with the Council's Open Spaces Strategy are clear that large scale developments such as this should provide mitigation measure in line with its impacts on demands for its infrastructure and public open spaces.

4.101 The overall provision of recreational open space is too small, fragmented with access roads introducing conflicts and detracting from the value of the space. The open space is also narrow, meaning activity will impact on neighbours and limiting how the space can serve the development. The nature of the design and space available means that the development proposed does not meet the requirements of the Open Spaces Strategy. In addition to the under provision of space, the loss of sports pitches further reduces opportunities available to people. In order to make the development acceptable, alternative provision of sports, play and recreational space needs to be made available close to the development.

Natural Environment – Trees

4.102 *Initial comments received 18/3/16* - In relation to the Arboricultural Survey, it is assumed that no major changes to the trees has occurred since the survey such that further recommendations for felling are required or tree loss has occurred – paragraph 2.4.2 states that the report should not be relied on for the purposes of development for more than 12 months from the date of the survey; the survey having been done on 25th & 26th January 2015, hence now being more than 12 months since the survey.

4.103 The Arboricultural Impact Assessment plan shows the trees to be removed. I don't have any objections in terms of their value and tree loss can be mitigated by new planting. The greatest tree loss would appear to be on the north boundary adjacent to Foudry brook in order to construct the new/revised pedestrian access. Adequate replacement tree planting and habitat enhancement will be required given the location along Brook Drive and on a designated Green Link. Landscape/habitat enhancement should be mindful of the results of the ecology survey, i.e. that the Foudry brook is a well-used bat route, has potential for hedgehogs and had a previous slow worm sighting.

4.104 The Officer provided detailed comments on each layout plan with regard to selection of tree species, the requirement for tree pit details for area of hard and soft landscaping, and the requirement for additional tree planting in certain areas**.**

4.105 With regard to the detailed part of the site the Officer also highlighted the need for: locations and specification of bird boxes, bat boxes/bricks, hedgehog; hibernaculums etc to be shown on landscape plans; the submission of a schedule of landscape maintenance covering a minimum 10 years period; detailed service plans to ensure services do not conflict with proposed landscaping or proposed trees as well as lighting; an Arboricultural Method Statement, along with its implementation.

4.106 For the outline area landscape principles need to be submitted. This is a significant development and will be prominent when passing though Green Park and further afield, hence we need to ensure adequate landscape provision can be afforded around the perimeter.

4.107 Further to the initial comments two sets of amendments were submitted and the Officer confirmed in their third response (August 2016) that their questions and requests had been addressed and recommended a number of conditions (as included in the recommendation above).

ONR

4.108 The scale and location of the proposed development is such that ONR do not advise against this application unless the emergency planners at West Berkshire Council which is responsible for the preparation of the Burghfield off-site emergency plan required by the Radiation Emergency Preparedness and Public Information

Regulations (REPPIR) 2001 state that, in their opinion, the proposed development cannot be accommodated within their off-site emergency planning arrangements.

Public Health

4.109 This team provided an assessment of the health impacts of the proposed development with regard to the known environmental factors in relation to the site location, and the health consequences for the future population occupying the site and nearby residential areas in terms of their likely health needs and demand on services.

4.110 The summary of the assessment is as follows: "An assessment of the environmental factors known to be determinants of long term health and wellbeing, highlights the following areas for potential consideration/mitigation;

- The potential impact of road noise on the use of outside recreation areas and sleeping with windows open in hot weather;
- Provision of accessible natural green space;
- Levels of air pollution from pollutants known to cause respiratory and other life shortening diseases;
- A 5% level of disability reported in populations needs to be considered when determining accessibility including the number of disabled parking bays. Car ownership in the area is currently higher than average.

4.111 In terms of raw numbers of demand on health and care services we can see that the area in which the development is proposed is one where there has been already significant increase in population size. This is reflected by the existing estimated increase in demand of primary care services in the area. The proposed development would bring a further 1,500 to 1,700 people to the area. We know that the existing population living near to the proposed site are not necessarily registered with just the two nearest identified GP Practices so the spread of this new demand is difficult to predict. South Reading Clinical Commissioning Group should be kept informed at every stage of the proposed development in order that they are able to plan for this increase demand in services as effectively as possible.

4.112 The current population consists largely of young adults and children aged under 5. It is reasonable to assume that the proposed development will attract a further increase in population consisting largely of these age groups. This will bring an increase in demand on children's services. The area has been assessed by the IMD 2015 as having already limited access to education, skill and training. The demand on school places brought by the new development needs to be considered in light of an already increasing child population.

4.113 Determining the likely health and wellbeing needs of a potential population is problematic as we are dealing with a number of unknowns. We are able to analyse the current health and wellbeing data to some extent to the granularity of a lower super output area in order to make the analysis as specific to the site location as possible. However, this in itself may not be adequate for us to determine the potential needs of future residents of the site which may, in some instances, differ from the needs of the current population on which the analysis is based.

4.114 We can see that the current population living near to the site have some indicators of poorer health and wellbeing than the local authority average and currently place high demand on services. The impact of the development on this existing population needs to be considered to determine that current residents are not been disadvantaged by the development or any related change of services."

Reading UK CIC

4.115 Reading UK CIC stated that "The Economic Development Plan for Reading talks in detail of the need to harness the unique opportunities provided by several major developments proposed for the south Reading corridor. Most particularly the CIC would want to ensure that local people benefit fully from local programmes aligned to developments that are of regional significance and major catalysts to the growth of our economy. We anticipate this development could be one of those catalysts."

Shinfield Parish Council

4.116 Shinfield Parish Council advised that they are concerned over the impact of Reading developments on local school places within Wokingham Borough and requested further information on the intended provision of school places specifically for these developments. The Parish Council is also concerned about the impact on the local highways network of additional development at Green Park and Junction 11.

4.117 Further to comments provided by the Applicant following the first round of consultation the Parish Council's view is that "whilst the provision of secondary school places can be met by existing capacity, the provision of primary school places needs to be met by section 106 contributions.

4.118 We would be keen to obtain further information on what Reading Borough Council's proposals are for when and where primary places are provided. We are concerned that the spaces at the new primary schools in Shinfield Parish will be used to provide spaces for this development, which could mean in the future, that insufficient spaces are available for new residents moving into Shinfield parish (particularly given the priority for siblings of existing pupils, even those living outside the parish)."

Sustainable Urban Drainage (RBC appointed consultant comments)

4.119 Based on the Flood Risk Assessment there is no objection to the proposed surface water drainage strategy which applies to the entire hybrid application area, subject to a number of conditions.

4.120 We note that attenuation tanks are proposed for this development, which reduce peak runoff rates considerably compared to runoff rates in the existing condition. We note that many outfalls have been limited to a practicable outflow of 3 l/s. Therefore further reductions in flow rates could have been achieved if several surface catchments had been combined to a single controlled outfall. Nevertheless, given the large reduction in peak runoff rates the proposed arrangement for reducing peak flows is acceptable, subject to the comments below.

4.121 We support the intension to use existing outfall locations where possible. Reading Borough Council recognise that infiltration devices and detention basins are not suitable for this development due to the geology, site history and space constraints. We are disappointed however that at this stage green roofs have not been considered as a means of controlling surface water runoff at source because of '*budgetary constraints and risks associated with waterproofing and loading on the structures*' (Section 5.2 of the Drainage Design Report). The drainage design report keeps the option of using green roofs open for future stages of the design, and we would recommend that these are adopted as they provide a range of environmental benefits in addition to managing surface runoff. If green roofs are not adopted we require a substantiated justification for this.

4.122 It is noted that a lined clay capping is present under the existing site, and that in the drainage calculations all catchments are assumed to be fully impermeable. As in reality some infiltration, storage and loss of runoff from permeable areas can be expected in the soils and vegetation above the capping, the developer should

specify the change in *total paved area* due to the proposed development. As this is not presented in the FRA we request that this is provided.

4.123 We note that green roofs could provide some benefits in runoff losses to the soils and vegetation that may be comparable to those provided by the soils/vegetation in the permeable areas in the existing condition (above the capping), at least for low return period storms. Therefore green roofs could contribute to the mitigation for any reduction in the losses in runoff from permeable areas due to the development.

4.124 Consideration should also be given to the use of (vegetated) rills and urban bio-retention features for above ground surface water conveyance, treatment and amenity benefits.

4.125 Recommended conditions are for the submission and approval of a Surface Water Drainage Strategy, and implementation in accordance with the approved details; and a whole life maintenance plan.

Sustainability Team - RBC

4.126 The Officer reviewed the Sustainability Statement and Energy Strategy Reports prepared by Hoare Lea and states that "In summary… the sustainability of the scheme follows guidance proposed in Reading SPD, although not detailed enough.

4.127 Given that the application is at Outline Design Stage for the residential element, it is difficult to be specific about approaches, particularly with regard to energy use. Community heating, and potentially CHP combined solar PV are assessed as preferred options to achieve higher CO2 reductions.

4.128 The target in terms of CO2 emissions for the proposed development is to achieve a 20 % CO2 reduction beyond the requirements of the Building Regulations Part L 2013.

4.129 The CHP strategy includes individual CHPs for each block, 1 CHP for the convention centre, 1 CHP for the hotel and serviced apartments and 1 CHP for Block 7.

4.130 A mechanism/stipulation needs to be put in place that allows RBC to ensure the specific design considerations are made at the appropriate stages as the design progresses. It is recommended that a requirement for a signed off Design Stage report from the BRE could be applied as a condition to be met prior to commencement of construction. Condition(s) should also be applied to ensure that all retail uses within the space meet the SPD requirements.

4.131 The baseline energy requirements and resulting CO2 emissions have been calculated as well as the impact of energy emissions measures and feasible renewable technologies. At this stage the calculation has aggregated all domestic and non-domestic uses. When detail design is available more detailed calculation should be encouraged to assess CO2 performance and compliance. Ability to comply with CO2 reductions as required for Code Level 3 and Code Level 4 (50 % split) relies on:

- All units will be connected to a community heating scheme, offering opportunities for the implementation of efficient central heating systems and efficient operation and maintenance.
- All units residential and commercial will adopt good practice "Lean" fabric and services efficiency measures in order to surpass Part L Building Regulations requirements.

- LZC Technologies to be adopted will include Combined Heat and Power augmented where necessary by solar renewable energy technologies.

This approach is welcomed, however they should submit detailed information at a later stage.

4.132 The proposed BREEAM targets are:

- The Hotel BREEAM target rating is Very Good (60.51 %)
- The Retail BREEAM target rating is Very Good (60.81 %)
- The Convention is now targeting a BREEAM rating of Very Good (60.46%)

More effort to achieve additional points to achieve a middle score between Very Good and Excellent should be recommended. The application appears to show general commitment, with BREEAM pre-assessment coming out a little bit low. A tenancy agreement for the retail element should be encourage as well to ensure SPD requirements are met.

4.133 The waste, water and construction elements of the application appear to be well considered. The choice of materials, containment and design constrictions associated with the shell may compromise the ability of the retail spaces to meet their BREEAM requirements.

4.134 The real issue is to monitor and ensure compliance with the statements made, allowing for the fact that details may change in the final delivery of the targets.

Thames Valley Police – Crime Prevention and Design

4.135 The initial response was an objection as follows: "I consider some aspects of the design and layout to be problematic in terms of crime prevention design and therefore feel that the development does not meet the requirements of; The National Planning Policy Framework 2012 (Part 7, Sect 58; 'Requiring good Design' and Part 8, Sect 69; Promoting Healthy Communities').

4.136 Further to the submission of a Counter Terrorism Strategy and Security Strategy Plan TVP confirmed acceptability of the scheme from a crime prevention perspective, subject to a number of conditions, as included in the recommendation above.

Thames Water

4.137 Their initial response requested identified that the Applicant would be required to submit a Pre-development enquiry to Thames Water and discuss any potential sewer diversions with the engineer dealing with their application.

4.138 In response the Applicant confirmed that a Pre-development Enquiry had been made on 13th July 2015 which proposed connection and discharge of foul water. Surface water would be discharged directly to the adjacent Foudry Brook. Thames Water responded to them (31st July 2015) requesting that a Sewer Impact Study would be required, due to concerns about the capacity of the sewerage infrastructure.

4.139 The Applicant has confirmed that this was commissioned and provided to Thames Water. In a letter from Thames Water to the Applicant (letter dated 11/3/16) they accepted that the proposed discharge rate of 92.7 l/s would be acceptable subject to an upgrade of the size of the sere pipe. Thames Water was referred to the submitted Drainage Design Report dated 11 January 2016 which provides further detailed support of the drainage proposals.

4.140 A further consultation response (15 September 2016) was as follows: No objection with regard to sewerage infrastructure capacity. With regard to sewerage infrastructure we would not have any objection provided that details of site drainage works as laid out in the Drainage Design Report – (Arup, rec 29/6/16), drawing Proposed Drainage Layout for Detailed Planning Application (Ref: CD-00101/P01) and the outcomes of Impact Study SMG1943 are adhered to. The developer must arrange implementation of the agreed strategy with Thames Water Developer services. Thames Water would require further consultation if changes to the drainage strategy occur.

Transport –RBC

4.141 In view of the transport matters affecting this application the RBC Transport final response (fourth) is attached in full in Appendix 3 to this report.

4.142 The initial response in April 2016 is summarised as follows and work to address the issues is document within part (v) Transport and Accessibility in Section 7 below.

4.143 *Green Wave Bus* - The site is served by Green Wave bus service and there is concern that the internal link road is inappropriate to accommodate a successful bus service.

4.144 *Football Services* - A loss of car parking spaces has previously been agreed as part of the approved stadium expansion application on the basis that the football club will undertake the following measures or alternatives provided:

- *Accommodating a significant increase in bus transport and supporting its use through a number of incentive measures that include:*
- *Increased bus parking on-site*
- *Priority access to and from the site*
- *Subsidised bus travel*
- *The provision of more bus journeys on existing and new routes*
- *Promoting car sharing; and*
- *Better and more facilities for on-site bicycle and motorbike parking.*

4.145 To accommodate the exit of supporters based on the proposed mode share of 61% for a 36,900 capacity stadium (enlarged) and utilising the loading of just 13 buses, it would take approximately 1hr and 45 minutes to clear the surrounding area of supporters. Any significant delays will not promote the service and will only encourage the use of the private car. The p/t interchange should be redesigned so that it can accommodate an increased loading capacity that limits waiting times for supporters.

4.146 Subsidised travel for fans has been proposed, however it has not been confirmed what forms of transport this will include.

4.147 The away supporters' coaches are to access the site via South Oak Way with a turning area proposed between the existing Millennium Hotel and the Multi Storey Car Park. To avoid conflicting movements within the site the turning for away coaches should be re-designed, as it is insufficient.

4.148 *Conference use - T*he main focus will be to provide suitable public transport provision to accommodate the movement of in excess of 4,000 people. Demand for Mereoak Park and Ride is increasing and should not be included within any assumptions for public transport to and from the site.

4.149 Shuttle buses for conferences would need to be located as close to the station as

possible. Detailed proposals need to be provided to establish where and how this would operate and included within the S106 Agreement.

4.150 The proposal will require a significant amount of public transport to be travelling along the A33 in between the site and Reading Town Centre. These trips will be within the peak traffic flows which have considerable delays at present and will be worse by year 2021.

4.151 The proposed 13 bus stops with 20 waiting spaces would appear insufficient to accommodate the pm peak demand and additional bus stops would be required.

4.152 The proposal includes the provision of 26 bus trips an hour for a two hour period in each of the peak hours. Although this is less than the demand for a football match the vast majority of bus / coach companies would have far fewer spare buses available given that these trips will be within the peaks. It is essential that the applicants can source the required level of buses.

4.153 *Access Arrangements* – Steps are proposed [on southern side] that link to the Public Right of Way (PROW) route 27 into Green Park located alongside Costco. Has the possibility of a ramped access been assessed as this would be a significant improvement to the existing situation?

4.154 A set of tracking diagrams have been provided for the internal link road but none of these appear to include two-way bus flow through the site, an updated drawing should be provided to include bus tracking.

4.155 On match/event days access will be restricted to allow the proposed bus hub, located on the northern boundary to act as a dedicated public transport interchange. In this situation, vehicle access to Blocks 1 to 7 and the MSCP will be retained but via South Oak Way / Biscuit Way only. In principle this is deemed acceptable, however it is noted that the carriageway located at the south western boundary of the multi storey car park is insufficient to accommodate a bus and a car and therefore some priority measure would be required.

4.156 On match days a significant amount of supporters on foot walk along Biscuit Way / Hurst Way. Clarification must be provided on how this will be managed to ensure that access and egress will be maintained to the residential properties and does not detrimentally impact pedestrian safety of supporters exiting the stadium.

4.157 The access arrangements for the residential properties [outline part of the application] have not been fully detailed. The layout should be in accordance with DfT document Manual for Streets.

4.158 *Junction assessment/ trip rates* - The transport network has been assessed using a Simulation and Assignment of Traffic to Urban Road Networks (SATURN) Model that has been produced using data from the Reading Model. The model data has been updated to include Manual Classified Count Data, Permanent Automatic Traffic Count Data and RBC Bluetooth Data. This approach was agreed during the pre-application discussions and is therefore acceptable.

4.159 TRICS data used must be clarified to ensure that the background flows are acceptable.

4.160 There were a number of queries regarding the specific data and based on the data provided at that time the outcome would be significant delays at several junctions along the A33 corridor. The Model has also assumed that the MRT and Green Park Station will be operational. No assumptions have been made that trips associated

with the development will utilise these forms of travel.

4.161 *Parking* – the development will result in a reduction of on-site parking for existing football and stadium events. A total of 917 spaces would be available, ca half that currently available on match days.

4.162 The proposed parking provision for the conference facility would equate to about 75% of the Council's parking standard. This is acceptable subject to on-street parking management.

4.163 No clarification has been provided as to why 100 spaces for the ice rink would be acceptable and this should be provided. A justification would be required as to why no parking has been proposed for the serviced apartments.

4.164 There are no proposed parking spaces for the restaurants, cafes and retail use which is acceptable given that any dedicated trips to their facilities are likely to be made outside the peak demands of surrounding uses.

4.165 Justification would need to be provided as to the office parking provision, which is 50% below standard.

4.166 Full plans for the 100 P&R spaces need to be provided.

4.167 Detailed clarification as to the management of all the proposed car parking spaces needs to be provided.

4.168 The residential car parking provision generally complies with latest Government advice. I have not assessed the full car parking layout and allocation of the residential units contained within the Outline application as this will be dealt with at the reserved matters stage.

4.169 The proposal includes for the provision of a car club and parking bays would be provided.

4.170 The level of proposed cycle parking provision is deemed acceptable. A relocation of the Readybikes is required.

4.171 Revised tracking diagrams need to be provided in terms of the deliveries to the ground floor of the convention centre/ restaurants, to the north of Block 2 and south of Block 1.

4.172 Revised taxi rank proposals need to be submitted.

(iii) Public Consultation

4.173 Letters were delivered to all residential addresses in Whitley Ward (just over 5,00 addresses) and emails were sent to a number of organisations, individuals and officers who are part of the South Reading Network.

4.174 18 no. objections, 12 no. comments and 8 no. support, were received and are summarised as follows/ covered the following key issues. The responses from STAR and Deloitte on behalf of the Green Park Reading no. 1 are documented more fully below:

- With the loss of open-air car parks, it is not clear where the forty or so buses park during football matches and if they are able to load quickly after the games. The

reduction in car park spaces and the probable loss of the Worton Grange Park and Walk will lead to excessive parking in local streets for matches.

- Although I am for improvement of Reading this project will cause more traffic in this area which has a big impact in getting in and out of Reading on certain days already more house to put people is great but 1 ice rink is landscaping is not going to improve the infrastructure of the area . Just look at junction 11 improvement and the cars are like the M25 as a car owner and a cyclist the simple floors make it unbearable at times there has to be a better link in roads, facilities that meet people's requirements not just houses and hotels. It needs the common people's needs not just the business man.
- My only concern is with regards to more residential units being built in this area. There has been a huge number of new residential units built in the area of town and there has been no new schools built to accomadate the influx of school age children. Schools in the area are already struggling to cope with the additional children requiring placements. Even with the school expansion project that has been happening may parents are being told they cannot get there children in their local school. I feel this really needs to be taken into consideration.
- I don't think the existing infrastructure in this area can handle more residents. The local schools are already full - Geoffery Fields has only just increased capacity. My doctors surgery is so busy it is almost impossible to get an appointment. The traffic is queued up at peak times. With this many extra houses, it will be queued up at all times. Will cause strain on schools, GP practices and the roads. Not fair on existing residents.
- There seems to be a lot of residential units but no mention of schools, child care or doctors surgeries, These facilities are already under extreme pressure, Also what about the road structure are they going to be made bigger for the extra amount of cars, vehicles on the roads.
- I really worry about being able to get to my home with all the extra traffic it will bring and when the football is on I already have problems because people park along the road and walk to the stadium this problem will just increase.
- Development could have an impact on childcare and free early education places especially with all the changes due to take place in 2017, there are no childcare facilities factored in to the planning application.
- The other points are schools and after school care facilities, also there is no mention of a schools? Or health centre, which GP practices have space to take on more patients.
- I am the Chairman of Reading Sharks Skater Hockey Club, a thriving youth-centred non-profit sports organisation Reading is lacking a roller-rink. We would like to propose, as part of the planning application, a multi-sports-rink installation on, in or nearby to the ice rink that is intended to be installed. This would provide Reading with a new space for minority sports to be held, enriching the area and bringing a new range of opportunities to people of all ages. With best intentions for the future of minority sports in Reading.
- I think it would be a great benefit to reading if you could also incorporate an indoor hockey rink in your plans for this development. The hockey rink could double up as a sports area and a skating rink. Would be good to include a multi sports hall / centre
- Please take in to account extending the facility to include a multipurpose rink for sports such as roller hockey, indoor lacrosse, broom ball, ball hockey ect.... Multisports court floor and boards with plexi would be ideal as there are a real shortage of facilities like this around the south of England.
- We need a sports arena to play and watch sports such a ROLLER hockey which my child and friends play. The venues in Reading do not accommodate spectators
- It would be fantastic if the plans could include provision for a sports hall for roller hockey and other minority sports. We are members of the BHRA league and have to travel a considerable distance to participate in this sport. I feel this would greatly

improve the facilities Reading has to offer and would draw people to the area from further afield.

- I am opposed to this planning application because of the lack of sufficient car parking spaces for visitors to the Stadium. Many Reading FC Season Ticket Holders, like myself and my wife, live many miles way. In our case 60 miles. Public Transport is not a practical option. We currently park at the stadium car park. People like us will be forced to use street parking in local residential areas that will significantly inconvenience local residents in places like Whitley Wood. It will also slow down traffic in these areas and will also be dangerous as other drivers try and manoeuvre around all the extra parked cars. Historically this was a problem at the old Elm Park. When the stadium was built it was my understanding it was subject to a certain number of car parking spaces being made available. In my opinion this should not now be overturned.
- I wish to lodge an objection on health and safety grounds. I used to drive my husband to football matches there and found it so congested on match days. This congestion occurred with all the space that there is around the stadium. To fill some of that with houses and flats with residents who may wish to leave their homes when a match is being played would be unsafe. In a smaller space this would be very dangerous especially with families going to the ice rink. The amount of car parking currently seems to be insufficient and with extra cars for the ice rink and the conference centre, to build on the existing car park seems unwise and in fact a risk to visitors without mention of the fact that the land used to be a landfill site.
- I applaud the vision and motivation behind this proposal and congratulate the Thai Owners their project team and the architects for an interesting and imaginative design.

  This is a huge project that will impact Whitley and Whitley Wood, Reading Football Club, the Town of Reading and indeed the South East of England.

  The impact on all the above will I think be hugely beneficial with the exception of the people of Whitley Wood and Whitley.

  For Royal Elm Park (a great name indeed) I believe it is of a different order of magnitude and it calls for its owners and sponsors to be magnanimous and match the scale of their design with a commensurate generosity and concern for the locality into which it will draw millions of people in the years ahead.

  What is in it for the people who live in the shadow of the Stadium and its surrounding development? They may be able to afford to eat and shop there if they wish. Some of them should hopefully be able to fill some of the jobs that are to be created (could RG2 postcode residents have first dibs?).

  For most the main impact will be clogged streets full of cars on match days increasing as we get back into the premiership and extend the ground. For a few who are house bound or only walk places it may have no impact at all; it could just as easily be on the far side of the moon.

  There are two significant neighbourhoods in Whitley and Whitley Wood that are in the bottom 10% of the country according to government deprivation indices. What has that got to do with Royal Elm Park? Nothing at all in one sense. I cannot find any link between Royal Elm Park and these deprived areas other than they are right next to each other. So What? Again I can see no planning argument that would require the project to even consider their neighbours! It would be possible to just pay the council their dues and leave them to allocate the money (hand on heart we have not been that good at that in Reading) some of which may help the lot of local people.

I appeal to the Thai owners their project team and the architects to show an above normal concern for their poorer neighbours and to redesign the Royal Elm Park project to include specific enhancements that will contribute to the well being of the Whitley Wood residents (the closest community), as an integral part of their project.

There appears to me to be limited ground available for community benefit in Whitley Wood but there may be other imaginative ways the local people could benefit? As a start, though I am aware of the plot around St Paul's Church which has a nursery and a pre school soft play scheme and a community hall on it. I am also aware of another small plot around the Whitley Wood Community Centre in Copenhagen Close (I declare a possible future conflict of interest as the Council have asked the church to manage the centre) that has some potential.

- This development is not suitable for an already congested area. Although some infrastructure is included in the project, the plan is too big for the area it will be built on. By the number of units on the application, I can only asses that the residential units will be very small and not offering a good enough standard of living. The motorway junctions will always be jammed due to convention centre, ice rink and hotel.
- The Hospitality Association, while in full support of the construction of the Royal Elm Park Development plans and welcoming the benefits this would bring the local economy, did have Major concerns about the infrastructure pressures, and expressed the needs of sustainable transport solutions for the entire Junction 11, A33 corridor be urgently addressed. The Association believes that the transportation proposal in the project is not viable and needs a major review. There will be influx of more cars coming into the area causing an increased traffic movement and disruption. The current traffic situation will become even more challenging .The association has a Major concern and we highly recommend that the planning office re-access and analyse the situation to find a sustainable solution for the area without which these plans do not seem feasible. If this is not addressed, we will object the project
- I strongly believe an ice rink would be a waste of money due to the close proximity of Reading to of both Bracknell rink and Basingstoke rink. I propose instead a roller rink such as the one which was recently shut down in Fareham, Hampshire (Solent Arena). The initial development and ongoing maintenance costs of a roller rink are much lower in comparison to an ice rink and as there are no such purpose built venues for roller sports within a 1 hour drive of Reading, if not further, it will attract people even from outside of Reading. Roller arenas however need not be used solely for roller sports- they provide a training space for other sports such as lacrosse and any other sport that can be played in the space provided. Roller discos are also popular across the country with both children and adults and would provide an additional income to the venue.'
- The town has changed dramatically in the last decade and for the better, attracting big firms and inward investment for the benefit of the region. Continuing this development and evolution is essential to the town and area to continue this progress. I am confident the Royal Elm Park project will add a further 'jewel in the crown' to our community.

Iconic and potentially nationally recognisable projects come along infrequently and when coupled with the innate nature of Reading FC, a cornerstone in our community, we can and should be fully supportive of such a project. I hope you find favourable their proposals and support them fully as we do.

- Having viewed and commented on the initial proposal before submission to Planning, I believe this to be a well thought out proposal for this site considering its strategic position with easy access from M4 J11. An out of town leisure and

residential development at this location will add little to traffic and infrastructure problems in the town, and will provide an accessible leisure destination for the surrounding area and neighbouring towns, as well as strengthening Reading's position as a business and leisure destination. I think that the developers have considered and addressed possible access and matchday problems and I welcome the inclusion of a transport hub within the development. Many Premiership football grounds manage successfully on far less car parking than that provided within this development and make good use of public transport links, as does this plan. As a resident of Reading Borough, I therefore welcome this proposal and urge the Planning Committee to accept all the broad proposals contained in this application.

- I am extremely concerned with the new proposal for the ice-rink which will be situated less than 1 mile from my business. Having this new leisure attraction built so close will have a detrimental effect on my sales for sure.
- I feel that this will greatly enhance not only the area around Reading Football Club but the town as a whole. The extra conference facilities, with the possibility of having large attendees, so close to J11 of the M4 is much needed.

Deloitte (on behalf of Green Park Reading No.1 LLP for whom Oxford Properties is currently the asset manager and of which Mapletree is the owner)

4.175 They submitted a holding response (3/5/16) which identified a range of additional information requested from the RFC's consultant team.

4.176 They sought to reserve their position until a response was received from Highways England, which they identified as a critical statutory consultee response, given the scale of the development proposals and their potential impact on J11 of the M4, the highway network in south Reading and the A33.

4.177 They submitted a further response and they stated that Green Park is a vitally important economic driver in both the Reading and wider Thames Valley economy and that the setting, providing a mature landscaped setting with significant ecological value is an aspect which is a key part of the Park's brand and ability to sell itself as a place to work to future occupiers and retain existing occupiers.

4.178 They consider that the scale of the REP proposals has the potential to significantly alter the character of Green Park, and unless development is designed and built in a sensitive manner, the impact on the character and viability of Green Park could be detrimental. It is, therefore, vitally important that the REP development proposals do not impact on the operation or activity at Green Park which would undermine the brand.

4.179 They referred to the restrictive covenant which exists on the Football Club land which prevents residential development unless the Green Park owners support the proposal. They state that GPR would expect to be party to the s106 in respect of the residential development proposals. They suggested a number of conditions and S106 requirements.

4.180 They highlighted GPR's concern about what the final residential scheme will look like and were seeking to ensure that the design and quality principles referred to in the Design & Access Statement (DAS) would be maintained.

4.181 The principle of development on this site is supported, but consider that the proposals could create adverse impacts in relation to design, transport solution and sustainable travel patterns, supporting economic growth and protecting the natural environment, if mitigation measures were not embedded in the decision making process to make the development acceptable both now and with future reserved matters applications.

4.182 They stated that GPR needs sufficient controls, through the design, quantum of development, scale and massing and reducing the parameter plans as appropriate. These controls take the form of conditions, s106 clauses and ongoing dialogue.

4.183 They identified that at meetings with RFC there had been collective agreement that the residential element must be high quality in terms of design, appearance and materials and requested closer links between the DAS and reserved matters so that RBC has the opportunity to control the design quality now.

4.184 They welcomed the inclusion of the number of residential units in the description of development but would also expect to see the maximum floorspace controlled through the application material.

4.185 They would expect a design code or specification to be conditioned as part of any outline planning permission, and requested further testing of views should be done at reserved matters stage to assess the detailed design and impact on views from Green Park.

4.186 They maintain that the scale of the blocks is too large and should be pulled back from the boundary and would wish to see the development to be no greater than the CGi and not at the upper end of the parameter as shown with the red line in the visuals, requesting that RBC put a limitation on the parameter plan to reflect this.

4.187 They raised concern over the level of open space and the potential impact on Green Park.

4.188 They raised a number of detailed points with the Transport Assessment, which they consider does not adequately assess the traffic situation, and identified the following key areas of concern:

- Suppressed travel demand applied for residential element of proposals by using Kennet Island as basis for forecasting given reduced parking provision at Kennet Island.
- Car based mode split assumptions for conferencing have no evidence base and appear low – e.g. 5% taxi.
- Comparison of traffic flows from base year model output with those from traffic counts consistently underestimates traffic flows at Green Park access points. Operational modelling of Green Park access junctions cannot therefore be relied upon and the effect is that estimates of queuing and delay cannot either.
- Reliance upon full implementation of MRT and operation of Green Park Station in the reference case work (do-nothing future year) which in turn underestimates the amount of car traffic using both the A33, at the access junctions and within Green Park.

4.189 They consider that the mix of uses would be crucial to the success of the wider development site.

4.190 They concur with the applicant's proposal of an off-site affordable housing contribution.

4.191 GPR is concerned about the loss of the trees at the top of the Foudry bank and would wish to see quality landscape screening on the boundary treatments both temporary and permanent.

4.192 They set out that the proposals do not appear to have addressed the potential for additional shading of the Foudry Brook and its associated corridor, which could impact on the vegetation growing in this area.

4.193 They raised some concerns over the capacity for utilities and services and wanted to have an input into the development of a construction management plan.

The Reading Football Supporters' Society Limited (trading as Supporters' Trust at Reading - STAR)

4.194 The following is a summary of the key points raised by STAR. The full comments are in Appendix 3.

4.195 STAR is not convinced that the proposal does as is stated in the Planning Statement page 58, para 10.12 , *"Ultimately, Royal Elm Park delivers facilities that will benefit local people and communities, place RFC supporters and visitors and their experiences at the heart of the proposals and creates an identifiable living, work and socialising destination within South Reading."*

4.196 STAR requested that the Council considers what safeguards can be put in place to ensure that the Football Club itself retains an interest, both financial and in terms of ownership, in the development.

4.197 They object to the transport proposals in particular the significant reduction in car parking provision on and around the site on match days without the provision of adequate, viable, cost and time effective replacement options. STAR believes these proposals put the development, not the Reading FC supporter, as the focus. STAR is not re-assured by the reliance on public transport as the solution to all supporter needs. STAR considers that if adequate on-site parking is not provided then there is a need to provide alternative parking sites within walking distance to supplement enhanced public transport. STAR believes, in addition to the current proposals, there needs to be more provision for car parking near the stadium, possibly in the form of:

a. Securing the speedway stadium car park on a long term basis;
b. Increasing the capacity of Mereoak Park and Ride (with additional shuttle bus provision;
c. Formal commitments to opening up some of the under-used spaces in Green Park and other business units within easy walking distance; and
d. Additional park and ride facilities to both east and west of the town (e.g. Winnersh Triangle and Theale Railway Station

4.198 The need for this capacity is not just for football supporters but also Convention Centre visitors and also the extreme circumstance when both football and Convention Centre events happen at the same time, as will inevitably be the case.

4.199 The applicant provided a specific response to STAR in their letter dated 29th June 2016. STAR provided a second response and maintained their objection and included some comparable data on journey times comparing journeys by car and public transport to different destinations.

Reading University

4.200 Reading is in competition, not just with other towns and cities in the UK, but globally, on a whole range of fronts, not least in terms of competition for inward investment, business relocations and students and staff. All of these bring with them benefits in terms of spending on other goods and services in the town with many current and future jobs depending on them.

4.201 The new housing and additional leisure and recreational facilities close to the stadium are clearly things that the town needs if it is to grow sustainably and remain liveable. For business to the attracted to the town and the jobs they bring with them, the provision of new housing in close proximity to the business parks and the town centre is essential. Although the International Convention Centre is probably the element of the project that is of key interest to the many global businesses that the town host at green park and elsewhere, from the perspective of the university, the real value of this development is in the overall message it sends that Reading is 'open for business'. It will both reinforce Reading's economic footprint and also signal that the town is facing the future with confidence.

4.202 The proposed convention centre will provide invaluable to the attraction of the Science Park [University development] to larger businesses as the concept develops and builds out. In the same way it will be attractive in the nearer term to businesses in Green Park and the Thames Valley Business Park enabling them to host colleagues from around the globe for major corporate events, something that is not available currently other than on a relatively modest scale.

5. RELEVANT PLANNING POLICY AND GUIDANCE

5.1 Section 38(6) of the Planning and Compulsory Purchase Act 2004 requires that proposals be determined in accordance with the development plan unless material considerations indicate otherwise. Material considerations include relevant policies in the National Planning Policy framework (NPPF) - among them the 'presumption in favour of sustainable development'.

5.2 The following national and local planning policy and guidance is relevant to this application:

National
National Planning Policy Framework (NPPF)
National Planning Policy Guidance

Reading Borough Local Development Framework – Adopted Core Strategy (2008)
CS1: Sustainable Construction and Design
CS2: Waste Minimisation
CS3: Social Inclusion and Diversity
CS4: Accessibility and Intensity of Development
CS5: Inclusive Access
CS6: Settlement Boundary
CS7: Design and the Public Realm
CS8: Waterspaces
CS9: Infrastructure, Services, Resources and Amenities
CS10: Location of Employment Development
CS13: Impact of Employment Development
CS14: Provision of Housing
CS15: Location, Accessibility, Density and Housing Mix
CS16: Affordable Housing
CS20: Implementation of Reading Transport Strategy
CS21: Major Transport Projects
CS22: Transport Assessments
CS23: Sustainable Travel and Travel Plans
CS24: Car / Cycle parking
CS25: Scale and Location of Retail, Leisure and Culture Development
CS26: Network and Hierarchy of Centres
CS27: Maintaining the Retail Character of Centres
CS29: Provision of Open Space

CS30: Access to Open Space
CS31: Additional and Existing Community Facilities
CS32: Impacts on Community Facilities
CS34: Pollution and Water Resources
CS35: Flooding
CS36: Biodiversity and Geology
CS37: Major Landscape Features and Strategic Open Space
CS38: Trees, Hedges and Woodland

Reading Borough Local Development Framework - Sites and Detailed Policies Document (2012)

SD1: Presumption in Favour of Sustainable Development
DM1: Adaptation to Climate Change
DM2: Decentralised Energy
DM3: Infrastructure Planning
DM4: Safeguarding Amenity
DM5: Housing Mix
DM10: Private and Communal Outdoor Space
DM12: Access, Traffic and Highway-related Matters
DM13: Vitality and Viability of Smaller Centres
DM14: Impact of Main Town Centre Uses
DM16: Provision of Open Space
DM17: Green Network
DM18: Tree Planting
DM19: Air Quality
DM21: Telecommunications Development

SA1: South Reading Development Principles
SA2: South Reading Strategic Development Sites
SA3: Retail, Leisure and Culture Uses in South Reading
SA11: Settlement Boundary
SA12: Core Employment Areas
SA13: Transport Improvements
SA14: Cycle Routes
SA15: District and Local Centres
SA16: Public and Strategic Open Space

Supplementary Planning Documents

Affordable Housing (July 2013)
Revised Parking Standards and Design (Oct 2011)
Employment, Skills and Training (2013)
Planning Obligations under S1096 (April 2015)
Sustainable Design and Construction (July 2011)
South West Reading Planning Brief (April 2000)
Reading Open Spaces Strategy (2007)

Other Guidance Documents

- Site Layout Planning for Daylight and Sunlight: A Guide to Good Practice Second Edition, by Paul Littlefair BRE, 2011
- BS8206 – Part 2: 2008 Code of Practice for Daylighting
- Guidance Notes for the Reduction of Obtrusive Light, Institution of Lighting Professionals (2012)
- Guidance for Outdoor Sport and Play – Beyond the Six Acre Standard, Fields in Trust (Oct 2015)

- Thames Valley Berkshire: Delivering National Growth, Locally- Strategic Economic Plan 2015/16-2020/21, prepared by the Thames Valley Berkshire LEP
- RBC Retail and Leisure Study by Colliers CRE, 2005
- Berkshire (including South Bucks) Strategic Housing Market Assessment, Final Report, Prepared by GL Hearn, February 2016

6. ENVIRONMENTAL IMPACT ASSESSMENT

6.1 The proposed development falls within Schedule 2 of the Town and Country Planning Environmental Impact Assessment Regulations 2011 as amended. It comprises development which is likely to have significant effects on the environment by virtue of factors such as its nature size and location. It falls within Category 10B of Schedule 2 – urban development. As the site area exceeds the threshold of 0.5ha the Development is likely to be lead to significant effects on the environment without appropriate mitigation. An Environmental Impact Assessment (EIA) was therefore required to assess the likely significant effects of the development on the environment.

6.2 The Environmental Statement (ES) is intended to provide the Local Planning Authority with sufficient information about the potential environmental effects of the development before a decision is made. In December 2015 the Local Planning Authority provided a Scoping Opinion which provided reference to matters which needed to be addressed within the ES, which the submitted information accords with. The ES predicts what the significance of each environmental effect will be, determined by two factors: (i) The sensitivity, importance or value of the environment (such as people or wildlife); and (ii) The actual change taking place to the environment (i.e. the size or severity of change taking place).

6.3 Therefore, in addition to the technical assessments submitted in support of the application an ES has been submitted. The ES includes chapters on the following:

- Environmental Impact Assessment Methodology
- Historic Environment
- Site and Proposed Development Description
- Alternatives & Design
- Construction Methodology & Phasing
- Socio-Economics
- Townscape & Views
- Ecology & Nature Conservation
- Water Environment
- Land Contamination
- Transport & Access
- Air Quality
- Noise and Vibration
- Daylight, Sunlight and Overshadowing
- Wind Microclimate

6.4 For each matter addressed the ES sets out the description of development, data necessary to identify and assess main effects, description of likely significant effects, direct and indirect, by reference to the development's possible impact on human beings, flora, fauna, soil, water, air climate, cultural heritage, landscaping and the interaction between these. Mitigation effects are identified where significant adverse effects are set out.

6.5 Any issues that have arisen with the material presented in the ES have been addressed through negotiation and amended information for specific elements of the scheme. The individual chapters have been used in assessing impacts and the appropriateness of the mitigation measures.

7. APPRAISAL

7.1 The following is an appraisal of the key issues with regard to relevant national and local policy and within the context of the information submitted in the ES.

(i) Principle of Development - Location

7.2 The application site is in South Reading, which is identified as a focus for growth and regeneration within the Council's policy framework. It is identified as a strategic location for development within the Adopted Core Strategy and the A33 corridor a key location for employment development. The SDPD includes a specific South Reading Framework. There are already a number of key developments along the A33, including Kennet Island, Island Road, Green Park Village, Green Park, and Worton Grange, which comprise a range of uses.

7.3 The proposed scheme would be an effective use of previously developed land, which would meet one of the core principles within the National Planning Policy Framework (NPPF, Para 17) and as set out in the adopted Core Strategy. However, it has to be noted that this site is a permitted landfill site and the proposed development sits above landfill, in some parts more than 12m deep. Development has the potential to disturb the landfill and cause pollution particularly of water courses. The landfill is also still actively decomposing generating comparatively high levels of methane and CO2 which pose risks to health. The applicant's environmental statement acknowledges the ground conditions and associated issues but argues that the development proposed can be safely provided. Land contamination is a significant consideration in determining this planning application and is dealt with in some detail below.

7.4 The location is adjacent to the A33, and close to the approved Green Park Station. Mereoak Park and Ride, and Junction 11 improvements have already taken place. The proposed South MRT which will run alongside the A33 close to the site. These contribute to this being a sustainable location for these significant commercial business and leisure facilities and for a large residential development, in accordance with paragraph 17 of the NPPF.

7.5 As the proposed scheme includes main town centre uses and it is not located in an existing centre, and not in accordance with an up-to-date Development Plan, it needs to undergo a Sequential Test (required under Para 24 of the NPPF, and set out in Core Strategy Policy CS25). The Test is to ensure that there are no alternative sites where the proposed scheme could be accommodated which are available, suitable and viable. A Sequential Test Assessment was undertaken and officers are satisfied that this demonstrates that there are no sequentially preferable sites.

7.6 In terms of impacts on other centres an Impact Assessment was undertaken (as required under Para 26 of the NPPF) with regard to the proposed A class uses and leisure offer proposed within the Convention Centre.

7.7 For the retail, such an assessment must be undertaken of the impact on existing committed and planned investment in a centre in the catchment area of the proposal and in the town centre and a wider area up to five years from when the application is made (Para 26 of NPPF). It is considered that the assessment has been undertaken to satisfactory standard which identifies that there is no

evidence that the A use class proposals would lead to significant adverse impacts on town, district or local centres in terms of viability or vitality.

7.8 There are no other ice rinks in existing centres and therefore this use would not have a significant adverse effect. In terms of concerts and other events there would be some overlap with existing venues including the Hexagon and the Town Hall in Reading, for example, but the proposed scheme would be of a large scale, able to accommodate up to 3,500 visitors, not present in Reading, and it is considered that the proposal would be complementary to existing facilities.

(ii) Principle of development - Uses

7.9 Although not specifically allocated for development in the adopted or emerging local plan, the proposed development accords with the strategic vision for Reading as set out in the Vision and Preferred Strategy in the adopted Core Strategy and the South Reading Framework in the SDPD. As a proposed cultural hub it also accords with a priority in Reading's Economic Development Strategy and aims of Reading's Cultural Strategy. It provides a mixed use development with a range of business and leisure facilities and residential development that will make a significant contribution to the economy and attractiveness of Reading and provide valuable facilities to serve the social and leisure needs of residents, employees and visitors.

7.10 The Berkshire Local Economic Partnership (LEP) confirm that the Thames Valley Berkshire Strategic Economic Plan (SEP) makes provision in its Implementation Plan for a "world class business/conference centre", and this venue, which could host very large conventions and exhibitions for national and internal business, would address a need within the Thames Valley. Support for the proposed scheme was also received from Reading UK CIC, Reading University and a business in Reading centre.

7.11 The Employment uses would meet the fundamental objective of promoting economic prosperity and the overall economic dimension of sustainable development as defined in the NPPF, and it would support ongoing economic growth within the Borough as set out in the Core Strategy. The submitted Economic Benefit Statement identifies a whole range of anticipated benefits including jobs, as documented in section (v) below, which would arise from the proposal.

7.12 Reading would provide an ideal location for a convention centre due to the higher than average number of economic and academic sectors which would support such a use and that Reading is home to a number of headquarters.

7.13 Within the Adopted Core Strategy Para 8.4 seeks to increase leisure and cultural facilities and Para 8.8 recognises the strong need for a range of facilities including an ice-rink and a theatre concert hall. The Retail and Leisure Study by Colliers CRE 2005, which formed a background Study to the Core Strategy, specifically refers to such uses. More broadly Para 3.18 of the Core Strategy supports provision of hotels through mixed use schemes. The recommended S106 Heads of Terms include the requirement for the Ice Rink space to be available for use in certain parts of the year and to have flexibility to cater for demands of other sports.

7.14 The NPPF recognises that providing a supply of housing is a key part of sustainable development (Para 7). The proposed housing would assist in the delivery (Par 47 NPPF) of the required 699 dwellings per annum as assessed as the Borough's need

to 2036 (Strategic Housing Market Assessment[1] (SHMA)). At the local level Core Strategy Policy CS14 supports the delivery of new housing and para 6.13 sets out that residential will continue to be delivered as part of mixed-used development in South West Reading particularly in the A33 corridor. Although the form and mix of housing proposed would not normally be acceptable, in this case there are specific and unique viability and other practical considerations which require a high density scheme as an enabling development to support the delivery of a convention centre. There would need to be formal agreement, through a Section 106 obligation that would ensure that delivery of the convention centre and ice rink are aligned with the delivery of housing, so that the housing cannot be delivered without the remainder of the proposed scheme.

7.15 The principle of the proposed mix of uses is supported by the adopted policy framework at the national and local level, subject to meeting other policy requirements.

(iii) Land Contamination

Ground Gas

7.16 The application site is a permitted landfill site which is subject to a Waste Management Licence/ Environmental Permit held by Reading Football Club. The licence status is closure, which means that it no longer receives waste. It had been licenced to accept household, commercial and industrial waste.

7.17 Between 1972 and 1985 the site was used for landfill, starting in the north-east of the site and then extending westwards. Originally, between 6m and 8m of fill was deposited in the form of land raise. During 1997, the north-eastern part of the tip was relocated to the west end of the site to make way for the new retail park to the east of the site and the development of the Madejski Stadium. Consequently, the land rises to the west and levels are higher on the western end of the site. In parts the level of fill material is around 12m in depth. The development of the Madejski Hotel commenced in 1999 and it was extended in 2006. The hotel is also built on the area of filled ground.

7.18 The ES notes that environmental monitoring of the site has occurred over a period of 20 years in accordance with the permitting licence. It noted that there were very high concentrations of ground gas in boreholes immediately to the north of the football stadium (para. 10.160). It notes that ground conditions may result in major adverse effects on human health and the built environment during the construction stage and that they may impact on the operational phase of the development (i.e. occupation). It sets out a summary of mitigation measures. These include management plans, specifically designed engineering works and of the buildings, and a ground gas risk assessment to determine the level of gas protection required. It indicates that in terms of gas emissions, the site can be characterised as level 2/3, based on the industry standard classification in CIRIA C665[2]. Based on this characterisation, it is contended that the proposed mitigation measures will ensure all adverse effects will be reduced to negligible.

7.19 The Planning Statement indicates that: "*through the Operational Phase of the development, the contamination management measures will need modifying to replace any compromised landfill infrastructure, in addition to gas monitoring to identify future gas protection measures to be incorporated into the design of the proposals. With regard to the proposals themselves, the aspects which are*

[1] Berkshire (including South Bucks) Strategic Housing Market Assessment Final Report, prepared by GL Hearn, February 2016

[2] Assessing Risks Posed by Hazardous Ground Gases to Buildings, CURUA C665 (2007)

identified as having potential for causing contamination are the service and car parking areas, with such effects mitigated through appropriate design solutions. It is considered that the mitigation measures proposed will be sufficient to ensure that all adverse effects identified through both the construction and operational stages will be reduced to negligible."

7.20 The Planning Statement refers to Chapter 10 of the Environmental Statement stating that it, *"considers any likely effects on a number of receptors and sets out the mitigation measures proposed to eliminate, reduce or offset likely significant adverse effects. A CEMP and phasing sequence will be prepared prior to construction to mitigate exposure to landfill material."*

7.21 The Design and Access Statement points to the following mitigation and design measures for the development to take account of ground conditions and contamination (para 6.8).

- Due to the high potential for continued ground settlement as a result of the 'made ground' nature of the site, a piled foundation strategy with suspended ground floor slabs will be required.
- Consideration will need to be given to the differential settlement that may occur between the public realm and proposed buildings should external ground levels be increased through new fill.
- Any new foundations, sewers and utilities will need to minimise penetration through the existing leachate capping membrane. Local lowering of the membrane will be required where construction does penetrate the capping layer.

7.22 Para 6.13 notes:

- The standpipe network can be reconfigured to facilitate development. However, venting columns will need to be repositioned and incorporated into the public realm design.
- New buildings will require additional protection from gas, through their design.

7.23 A2.1 notes that, "*As identified in the site wide features and constraints plan, the convention centre site will require a series of landfill gas protection measures to be incorporated into the construction of the substructure of the new buildings. This will prevent the upwards migration of ground gases into and around the new buildings and reduce the risk of gas build-up in any confined spaces. The design of these will be based on further site investigation, monitoring of ground gases and subsequent quantitative risk assessment."*

7.24 Appendix 10.12 notes under the heading Gas Pipe Venting, "*The designers have worked closely with the engineers to advance an integrated design strategy for dealing with the requirements for gas vent piping through the building." A10.13. goes on to say, "As such, a network of standing pipes will be integrated with the other service cores and vent to air at roof level."*

7.25 An Environmental Strategy dated November 2015 sets out how the development will take account of ground conditions. It details the past history and the monitoring that has been undertaken and which remains in place on the site. It then provides various design measures which can be summarised as follows:

- Piling proposals involving continuous flight auger (CFA) piling which is based on the design and methodology used for the construction of the Stadium and the hotel;
- Earthworks proposals to construct the foundations and ground floor slabs of each building above the existing capping layer. This capping layer currently

prevents surface water from getting through to the waste layer below and it also provides a protection layer to stop any contact between the waste and people using the land above by sealing if off and providing a route through to vent gases above ground. Piling and slabs will replace the capping layer underneath the buildings. The capping layer will then be lapped and sealed with the ground floor slabs;

- Ground Floor Slab Detail - The usage of each area and the Characteristic Gas Situation (CS) will govern the ground floor slab build-up. Final build-ups will be designed in accordance with a 'Code of Practice for the design of protective measures for methane and carbon dioxide ground gases for new buildings.' The suspended reinforced concrete ground floor slab will be cast on a membrane. The membrane beneath the slab will be lapped with the existing membrane around the perimeter of the building.
- Gas vent pipes will channel any collected gas from beneath the sealed layer and vent it to atmosphere.

7.26 It should be noted that the usage of the lowest building levels varies between buildings. Typically for the residential blocks, the areas are ventilated car parks. Under the Convention Centre the use varies from a car park, loading bay, hotel lobby, serviced apartments, and bar and food and beverage areas. Particularly where ventilated, these lower building levels will act to disperse any gas that might inadvertently get through the membrane barriers. However, this part of the development is not wholly above a ventilated void and additional secondary membrane barriers will be installed as an additional precaution.

7.27 The Environmental Strategy considers a number of scenarios including Scenario 3 (Section 10.3) which examines the upward migration of landfill gas to the surface. Under this scenario, it notes that there is potential for human health (construction workers and end users) to be affected by gas accumulation, the magnitude of which is assessed as major, having the potential to cause asphyxiation in the worse cause scenario. It goes on to state that, *"The buildings themselves will require specially designed and detailed gas protection measures in the permanent condition to protect the internal spaces against ingress and build-up of ground gas."* The study indicates that a series of landfill gas protection measures will be incorporated into the construction of the substructure of the new buildings. This will prevent the upwards migration of ground gases into and around the new buildings and reduce the risk of gas build-up in any confined spaces. The design of these will be based on further site investigation, monitoring of ground gases and subsequent quantitative risk assessment. Lists of other measures are set out in the section for "During Construction" and "Post Construction." It concludes that, *"based upon the findings of the landfill gas risk assessment the level of risk for the proposed redevelopment is considered acceptable provided that the similar protection measures are employed and that care is taken to fully integrate them with those already in place."*

7.28 Reading Borough Core Strategy Policy CS24: Pollution and Water Resources states that development will be permitted on land affected by contamination where it can be demonstrated, to the satisfaction of the LPA, that the contamination can be satisfactorily remediated so that it is suitable for the proposed end use.

7.29 The National Planning Policy Framework (NPPF) seeks to encourage the effective use of land by reusing land that has been previously developed and to remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate. However, it also indicates that the planning system should enhance the environment by preventing both new and existing development from contributing to, or being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability.

7.30 National Planning Policy Guidance (NPPG) contains pages on land affected by contamination noting that in relation to such land the planning system runs alongside other regimes including the Building Regulations, Environmental Protection and Environmental Permitting Regulations. The Environment Agency is the primary organisation in relation to the latter two regimes and it has been consulted in relation to this application.

7.31 The NPPG includes a diagram for decision making that indicates that it is for the applicant to carry out studies to demonstrate that any risk is acceptable or that remediation proposed make the risks acceptable. It indicates that developers should provide proportionate but sufficient site investigation information (a risk assessment) to determine the existence or otherwise of contamination, its nature and extent, the risks it may pose and to whom/what (the 'receptors') so that these risks can be assessed and satisfactorily reduced to an acceptable level. It refers to Defra and Environment Agency publications that provide technical guidance on carrying out assessments of contamination and risks.

7.32 The NPPG also indicates that before granting outline planning permission, a local planning authority will, among other matters, need to be satisfied that:

- it understands the contaminated condition of the site;
- the proposed development is appropriate as a means of remediating it; and
- it has sufficient information to be confident that it will be able to grant permission in full at a later stage bearing in mind the need for the necessary remediation to be viable and practicable.

7.33 This is a hybrid application for which outline planning permission is being sought for the main part of the proposed residential development.

7.34 The NPPG indicates that permission can be granted subject to conditions but it points out that local planning authorities should be satisfied that a proposed development will be appropriate for its location and not pose an unacceptable risk.

7.35 As set out in NPPG, development on contaminated land is subject to a number of regulatory regimes and the Environment Agency have an important role in relation to this site as it is a permitted/licensed landfill waste site. Consequently, any development, or disturbance, of the site will need permission (or a permit) under Environmental Permitting Regulations. That will be separate to the granting of planning permission.

7.36 As a permit site, the application site is subject to a high level of monitoring to ensure that no pollution is occurring, particularly to groundwater and water courses. The Environment Agency, which has primary responsibility for water pollution matters, has not objected to the principle of development although it did originally object on the grounds of adverse impacts on ecological habitats arising from the form of development. The Agency's initial response did not made any comments related to the suitability of the site to accommodate sensitive developments such as residential development. While matters related to human health are primarily the responsibility pf the local planning authority, under the permit, the Environment Agency also has responsibility to consider whether development will be permitted in relation to the control of pollution and potential impacts on human health. The Agency continued to review further data and material submitted by the applicants in response to requests from the local planning authority. Further clarification was sought from the Agency in relation to their role under the Environmental Permitting Regulations and this was documented in their final response in January 2017.

7.37 Advice to us from the Environment Agency points to the following. Their full final response is attached at Appendix 3:

Reading FC landfill was a landfill for re-deposited non-hazardous waste and is known to be producing landfill gas and leachate. Landfill gas consists of methane and carbon dioxide which is produced as the waste in the landfill degrades. Methane can present a risk of fire and explosion. Carbon dioxide can present a risk of asphyxiation or suffocation. The trace constituents of landfill gas can be toxic and can give rise to long and short term health risks as well as odour nuisance.

The risks associated with landfill gas will depend on the controls in place to prevent uncontrolled release of landfill gas from the landfill site. Older landfill sites may have poorer controls in place and the level of risk may be higher or uncertain due to a lack of historical records of waste inputs or control measures.

7.38 During the discussions both at pre-app and planning application stages, council officers have expressed concerns that the existing monitoring regime provided insufficient information on the characterisation of the application site, which is wholly on landfill that is still in the process of decomposition and thus liable to shrinkage and emission of toxic gases, in particular methane and carbon dioxide. In the opinion of officers, advised by an expert consultant, the applicants provided insufficient information as part of their application to properly characterise the site and thus properly assess the risks involved in its development, particularly for sensitive uses such as residential uses.

7.39 The Council's Environmental Protection and Nuisance Manager, advised by Tweedie Evans Consulting, specialists in contaminated land, initially raised concerns over the proposals. The absence of specific on-site monitoring at that time, particularly of borehole gas flow rates, meant that in their view, ground gas emissions within the development area had not been adequately characterised. They did not consider that the contaminated condition of the site with respect to the gassing regime had been fully demonstrated. Their view was that there was inadequate information to demonstrate the Applicant's contention that the site is a very low risk gassing site, and that the waste is nearing stabilisation both physically and biologically.

7.40 In response to these concerns the Applicant's initially sank an additional three gas monitoring boreholes. These were located along a line running East-West through the centre of the site. These wells were installed during June 2016 and a Geo-environmental Interpretive Report was submitted on 29th July 2016 detailing the first round of results of the monitoring of the 3 new wells. This highlighted problems with one of the boreholes. Readings from the other 2 boreholes indicated elevated levels of methane and carbon dioxide, compared to the assumed Level 2/3 characterisation of the site. That raised further concerns and, consequently, the Applicant was requested to provide further boreholes to provide gas readings, specifically in the areas proposed for residential development in the western part of the site.

7.41 In response to this request, additional boreholes were installed by the applicant during December 2016 with monitoring commencing in January 2017. The first readings reported in February 2017 resulted in the characterisation of the site being raised from Level CS2/3, as had been indicated in the original environmental statement that accompanied the application, to Level CS4/5.

7.42 In order for a proper characterisation of the site, gas readings are required over a period of time (which takes in different weather conditions, including falling

atmospheric pressure). Further monitoring was therefore undertaken during March 2017. While these readings show some more elevated readings compared to January/February readings, the applicant remains of the view that the site can be characterised at a level 4/5 and that, technically, it is capable of development for residential uses.

7.43 The applicant (represented by Arup in this regard) is of the view that the design proposals submitted with the planning application provide robust protection measures suitable for preventing gas ingress to the proposed accommodation for a Level CS4/5 site on the basis of the empirical method set out in CIRIA C665 and in BS8485:2015. The Council's consultant, Tweedie Evans Consulting, has reviewed the Technical Note, dated 31st March 2017, issued by Arup covering the additional investigation and gas monitoring undertaken by Arup between 12th December 2016 and 29th March 2017.

7.44 The response form TEC is as follows:

"The last reporting that was previously formally commented upon was the Arup report referenced 240524-98REP/240524-98 dated 20 October 2016. The comments relating to this report were detailed in correspondence referenced 1603013.001.03 dated 18 November 2016. In this correspondence, several concerns regarding the assessment works that had been undertaken at the site were noted. These concerns related to:

1. *Encountering of pressurised gas pockets during drilling and implications with respect to the development;*

2. *Data from newly installed boreholes GW01, GW02 and GW03 principally relating to the manner of installation;*

3. *Atmospheric pressure conditions during monitoring particularly relating to the absence of flow data during periods of low and falling pressure, periods where significant borehole differential pressures were being recorded;*

4. *Absence of confirmation regarding materials being monitored in boreholes R, S and T, locations from which the only long term data has been presented; and*

5. *Future potential for gas generation and settlement.*

With regards to the last point initial comments regarding ground stability and future gas generation were largely related to the future requirement to maintain the Environmental Permit for the site. It is my understanding that the Environment Agency has issued an advisory notice as to what their requirements will be, under waste licencing provisions, with respect to ground stability should planning permission be granted. On this basis, therefore, given that the applicant has indicated that all services will be placed within the clean capping layer and that they have accepted that there will be a significant ongoing maintenance requirement as part of the development in the future, I have not commented further regarding this area.

<u>Additional Investigation</u>

Further to these comments the applicants agreed to undertake additional investigation and monitoring on site with intrusive works commencing on 12 December 2016. Following these works, a report, titled "Site Characterisation Update Report" dated 17 February 2017 and referenced 240524-98, was issued covering the work undertaken. This report detailed the advancement and installation of five boreholes (GW04, GWE05, GW06, GW08 and GW09) within the landfill mass up to a maximum depth of

14.7m. The logs for the boreholes confirmed similar landfill materials, with a significant putrescible content, as previously identified in GW01, GW02 and GW03. It is understood that pressurised pockets of landfill gas were once again encountered during drilling works.

GW04, GW06, GW08 and GW09 were advanced within the southernmost area of the site where the principal residential component of the development is being proposed. GW05 was advanced within the general vicinity of historic boreholes R and S in the northern most area of the site where it confirmed the presence of 10.7m of landfill material above the underlying natural ground. This would suggest that R, S and T are likely to be installed within the main landfill body, along the boundary of the development site, although installation details have still not been provided.

All five boreholes were installed with monitoring standpipes to depth which now allows for monitoring of much of the unsaturated depths of the landfill mass.

Additional Monitoring

The recent Technical Note summarises the monitoring undertaken on the boreholes installed within the development area. The first of the most recent boreholes to be installed was GW08 with monitoring commencing of this location on 04 January 2017. Monitoring of the remaining four new locations commenced as and when the boreholes were installed with monitoring of all five locations being possible from 31 January 2017. The final round of monitoring reported in the Technical Note was dated 29 March 2017 with all five locations being monitored on a minimum of six occasions and GW01, GW02 and GW03 also being monitored intermittently over this period.

The Technical Note does not discuss atmospheric pressures recorded during the monitoring in any detail although it does recognise how important changes in barometric pressure can affect gassing emissions. However, a quick review of the factual data supporting the note indicates that much of monitoring was undertaken at moderate to high atmospheric pressures with only a single monitoring visit occurring at low and falling pressure (27 Feb, 982-987mb). The peak borehole flow rate of 37.9l/hr, and associated borehole differential pressure of ~44mb, occurred on this date confirming that gas emissions are likely to be directly correlated to significant drops in pressure.

The Technical Note further attributes a Characteristic Situation to each location specific monitoring visit based upon the concentrations and flow rates recorded and, based upon the range of "CS's" derived, have assessed the site as being of CS4/5 (moderate to high risk rating) and it is noted that a risk rating of CS5 has been calculated on at least one occasion for five out of eight boreholes installed (five out of seven if the flooded borehole GW01 is excluded). However, current guidance indicates that where limited data exists for a site that the Characteristic Situation attributed to the overall site should be based on a worst case situation of maximum borehole flow rate and gas concentration irrespective of date and location. I recognise that better quality data has been derived from the landfill mass during the most recent works however given the sensitivity and size of the site I would consider the data set recorded still to be restricted. Therefore, using the worst case data from the site (37.9l/hr and 82.8%v/v methane (GW03)) this would give a limiting borehole flow rate of 31.4l/hr well within CS5 (high risk).

Gas Protection Measures

Arup have provided an outline of design measures which would be incorporated into the development to provide adequate protection for the proposed end uses. For the commercial properties and residential developments over basement car parking, it is

likely that there are technical solutions, such as those described by Arup, which if designed, installed and maintained in in line with BS8485:2015 (Code of practice for the design of protective measures for methane and carbon dioxide ground gases for new buildings) would be to protective of the development with CS5 (high risk rating) gassing conditions. However, where residential property is located at ground floor without a ventilated car parking basements this may be more difficult to achieve.

Conclusions

I indicated in my previous correspondence that even for an outline planning application the Local Planning Authority…..

"needs to be satisfied that:

- *it understands the contaminated condition of the site;*
- *the proposed development is appropriate as a means of remediating it; and*
- *it has sufficient information to be confident that it will be able to grant permission in full at a later stage bearing in mind the need for the necessary remediation to be viable and practicable".*

I would consider that both the coverage of boreholes now provided by the applicant and the extent of monitoring undertaken (including the low and falling period of atmospheric pressure) is the minimum that would be required at this pre-application stage and provides a general overview of the higher risk that would be expected to be associated with a site such as this. Any permission that you may feel minded to grant is going to have to have conditions applied to require substantial additional investigation, monitoring (over a suitable period) and assessment of the gassing regime to confirm these initial findings. Should these additional investigations confirm the current risk assessment it is likely that, based upon current guidance, the provision of the range of solutions to appropriately mitigate against the landfill gas present will not pose a technical barrier to development going ahead. Furthermore, in addition to the gas protection measures outlined, BS8485 requires that any gas protection measures for managed apartments will need to be subject to ongoing long term management by a body of substance who will have the control, resources and access to maintain the measures in the site.

Notwithstanding this, given the limited extent and duration of the monitoring to date, the highly variable nature of the data gathered, the significant putrescible content recorded as well as the presence of pressurised gas pockets it cannot be discounted that such future monitoring may indicate even more onerous gassing conditions may be locally recorded which may require the protection methods currently outlined to be readdressed."

7.45 The proposed development site is a landfill site subject to high concentrations and flows of landfill gas. The applicants monitoring and assessments have characterised the site as CS5. Technical solutions have been put forward to enable residential development of the land with this characterisation and expert advice indicates that if designed, installed and maintained correctly those measures should reduce risks to acceptable levels. Therefore, subject to appropriate planning obligations and conditions, it is concluded that planning permission can be granted for this development on this site.

7.46 NPPG says that in relation to contaminated land, local authorities can consider

1) *Using planning obligations* - for payments to the local planning authority, for example, for on-going monitoring, maintenance, or as a bond to cover the contingency of future action triggered by the monitoring.
2) *Using Conditions* – including for site characterisation, submission of the remediation scheme – what it should include; implementation of the approved remediation scheme – notification to the local planning authority of when the works will start, validation that the works have been carried out and reporting of unexpected contamination; and monitoring and maintenance – what is required and for how long.

7.47 Site Characterisation and Future Monitoring - In the Environmental Strategy submitted by the applicants with their application, it was proposed that a programme of ground gas monitoring be carried out in accordance with the latest industry guidance CIRIA guidance 6651 and BS 8485:2015 prior to the commencement of development and/ or the submission of reserved matters.

7.48 It also has to be remembered that a permit will need to be obtained by the developers from the Environment Agency prior to any development. This permit will also control the measures to prevent emissions and pollution as a result of both the construction and operation of the development. The developers will also have to obtain Building Regulations approval which will take account of the risks posed by the ground conditions. Developers therefore face further and separate regulatory challenges even though planning permission is granted.

7.49 Frequent, more comprehensive, long term monitoring of the site will therefore continue into the future. From a planning point of view, monitoring should be maintained to demonstrate the characterisation of the site, changing ground conditions and the level of gas being emitted to ensure that any remediation and management regime remains appropriate. The condition (s) will require that the monitoring information and analysis is provided to the local planning authority on a regular basis.

7.50 Remediation - The Environmental Statement submitted with the planning application provides details of the engineering works and building design to take account of the characterisation of the site. They claim that the works proposed is appropriate for a site with a Level C4/5 characterisation. The Council's Environmental Protection and Nuisance Manager, advised by a Tweedie Evans Consulting, accept that the design is appropriate in principle. Further, more detailed design will be required to be submitted prior to the commencement of development for the detailed part of the application that includes the conference centre, hotel, serviced apartments and the residential development in Block 7. Any outline permission will require the submission of details for the residential blocks 1-6. There will also be a need for conditions to secure the implementation of the approved design.

7.51 Management of the site and the development - The safety of any development will depend on continuous future management of the site and any gas mitigation measures that may be implemented as part of the development. These will need to be mindful of:

- wider site safety issues (e.g. contamination hazards, combustion hazards, etc.);
- ambient air quality (e.g. from volatile or trace gases);
- the anticipated life expectancy of the protection measures;
- the size and experience of the management company; and
- the operations and maintenance procedures that they propose.

7.52 The management company responsible for the site will need to demonstrate that they have the knowledge, experience and resources over the life of the development, to manage and maintain the site and the development safely at all times. For example, it would not be acceptable for a large developer to pass the development on to a small management company which is the responsibility of the residents, as they would not have the resources or knowledge to ensure appropriate control in the long term. The developer would have to demonstrate that the gas remediation design can operate efficiently and passively at all times, with minimal requirements for maintenance. Appropriate Management conditions are therefore proposed.

Groundwater

7.53 NPPF para 109 states that the planning system should contribute to and enhance the natural and local environment by preventing both new and existing development from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels of water pollution. The EA's approach is set out in Groundwater Protection: Principles and Practice (GP3) dated August 2013. Core Strategy Policy CS34: Pollution and Water Resources states that development will only be permitted where it would "….preserve or ideally enhance ground and surface water quality….".

7.54 The site lies on a historic landfill over a secondary aquifer. The EA originally objected on the basis that inadequate information had been supplied to demonstrate that the risks posed to groundwater could be satisfactorily managed. They set out that there would be potential for contamination of the aquifer through pathways formed through the landfill from the development of this site. Use of approximately 5000 building piling foundations, and any infiltration for surface water disposal, could potentially form pathways for leachate to migrate vertically into the underlying groundwater aquifers. The aquifer can be used for drinking water supply.

7.55 Further information was submitted by the Applicant (Environmental Strategy Rev A, rec 6/7/16) which assesses risks and potential environmental impacts, predominantly to groundwater, associated with earthworks and piling for the development. This dealt with the issues of the potential risk to the underlying Principal Aquifer from the use of piling, and the need to dewater the gravel aquifer during the piling phase of construction.

7.56 The EA was satisfied and removed their objection with regard to groundwater, subject to the imposition of a number of conditions regarding groundwater monitoring, dewatering and piling, which are included above.

7.57 The Applicant highlights the risk to water pollution which would arise from construction vehicles releasing sediments. This will require a mitigation strategy and the requirement for the submission and approval of a construction environmental management plan is included as a recommended condition above.

(iv) Transport and Accessibility

7.58 Issues relating to transport and parking are fundamental to whether this scheme is acceptable. Transport matters are summarised within the Planning Statement, DAS, the Transport section of the ES and a Transport Assessment.

7.59 The underlying rationale is to move away from car travel being the preferred means of access to the site and to seek to manage and reduce event congestion. Underpinning this approach are the following key components:

- Improvements to the accessibility to the site by sustainable modes.
- A substantial increase in public transport usage.
- Reduction in parking for events to reduce congestion.

7.60 For this to be successful requires significant investment in sustainable travel and facilities for it. The transport aspects of the proposal are summarised as follows:

Public Transport

- Transport Interchange ('Interchange Square') which the Planning Statement states is intended to create a welcoming gateway experience, accommodating and managing large flows of pedestrians, to accommodate a high number of bus movements, from 14 bus stops and a turning area and stacking space for circa 35 buses. This would have designated queuing and waiting zones for shuttle, local and regional bus services and ticketless loading of buses to speed up boarding post events. A safe waiting area would be provided within the Royal Elm Square, with crossing live carriageways not possible.
- 'Bus only' use of Northern Way for matches and bus lanes on Hurst Way and Northern Way exits for day to day use
- Bus stops for Mereoak & Shinfield shuttle buses and regional matchday services retained for use on South Oak Way.
- Free local public transport to site for match day and other events included in entry fee.
- Additional 'away supporters' coach bays.
- Internal link road to provide bus stops for daily services.
- New bus services proposed to increase the frequency on match days and high attendance events.
- For conferences a pre-booking system will be used to determine the catchment and origin of attendees, and bespoke bus services will be procured as necessary, over and above the planned regular shuttle busses from Reading town centre.

Cycling and Pedestrians

- Increase in car parking from 100 open air to 500 covered spaces
- New pedestrian ramp/steps and bridge into Green Park with access to the planned Green Park Station.
- New pedestrian steps on the south of the site linking to the Public Right of Way.

Parking

- 917 spaces for the stadium, ice rink and convention use.
- Total of 942 (approximately half that currently available on match days)
- Overall loss of 883 car parking spaces, including a reduction of park and ride spaces from 600 to 100.
- Multi-storey car park with six levels to accommodate 616 car parking spaces, motorcycle and bicycle spaces.
- Two storey car park within the convention centre providing circa 129 spaces.
- 197 ground level spaces
- Registration plate pre-booking system to manage car parking spaces on event days.
- Ground level parking (below residential accommodation) to serve the residential blocks – total of 740 car parking spaces and 144 visitor spaces

7.61 It should also be noted that there are a number of other strategic transport improvements being planned and delivered by other agencies, which would affect the accessibility of the site including:

- Shinfield Eastern Relief Road by University of Reading for Science Park (under construction);
- Crossrail 1 –Services to Reading by 2019.
- Reading Green Park Station – funding is secured and it is due to be completed by 2019.tion – The station has planning consent and funding is secured. It is due to be completed by 2019.
- Reading Mass Rapid Transit – series of bus lanes and segregated busways connecting south Reading with central Reading.

7.62 Through the course of the application period a range of additional information has been submitted by the applicant including amended plans, and technical notes, and the applicant has sought to resolve issues including through direct dialogue with a number of parties including the Council.

7.63 The issues raised by RBC Transport follows thorough and ongoing assessment of the proposals at both pre-application and post application submission stages. Additionally issues were raised by Wokingham Borough Council's Transport Department, residents and other organisations, including the owners of Green Park Business Park, and Highways England.

7.64 RBC's Transport Manager's full initial consultation response, which has taken into account the requirements of the implemented stadium expansion permission, is included at Appendix 3. A summary is included in section 4 above. The response is documented under the following headings: public transport provision; access arrangements; junction assessment/ trip rates, parking and general layout. The final position (consultation response dated 7th April 2017) in relation to these is set out below under the above headings:

Public Transport Provision

Park & Ride

7.65 The permanent reduction of Park and Ride spaces is agreed, subject to the Park and Ride bus service still being able to adequately serve the application site.

Green Wave Bus

7.66 An amended internal road layout provides priority to the existing Green Wave bus service which provides confidence that the service could be retained, and amended drawings show bus lane approaches at Northern Way and Hurst Way, which will help to get the buses ahead of car traffic queues exiting the site. In addition bus stop locations have been revised to be located in the bus interchange as well as retained stops on Northern Way. The exact location of all bus stops would need to be agreed and a condition is recommended.

7.67 The applicants have anticipated that the existing Green Wave service could serve the day to day operation of the proposed development, but Transport states that the service is currently at capacity. The patronage/occupancy will need to be assessed closer to the opening date of the proposed scheme, to determine if and when services require improving at that point in time. In order to secure this a Section 106 obligation is included above.

7.68 The bus priority measures at Northern Way and extended proposals for Hurst Way are acceptable. It is recommended that the phasing of their implementation is secured by a suitable clause in the S106 agreement or a condition.

Football Services

7.69 A loss of car parking spaces was agreed as part of the approved stadium expansion application on the basis of the football club: Accommodating a significant increase in bus transport and supporting its use through a number of incentive measures that include: Increased bus parking on-site; Priority access to and from the site; Subsidised bus travel; The provision of more bus journeys on existing and new routes; Promoting car sharing; and better and more facilities for on-site bicycle and motorbike parking. Therefore this proposal would need to ensure that these or alternatives are provided.

7.70 The Transport officer requested a comparison of the timescales to accommodate supporters within the bus interchange permitted as part of the 2007 expansion, shown as 100 buses on the areas of car park 1 & 2, with the proposed scheme. The assessment, confirmed as being robust, shows that the proposed interchange would be an improvement on what has previously been secured and could accommodate additional passengers, critical given the significant mode switch that would be required.

7.71 Subsidised travel for fans has been proposed to include bus and rail, which is considered acceptable by the Council as it would encourage a significant proportion of supporters to travel by alternative modes. It is recommended that the relevant area to which this will apply is secured by way of a Section 106 obligation. In addition a condition is recommended for pre-commencement submission and approval (in agreement with bus and rail operators) of a management plan which details the ticketing system required for both bus and rail travel.

7.72 The applicant has also committed to providing additional Stadium Park and Ride (Shinfield & Mereoak), shuttle and dedicated match day services.

Conference use

7.73 Although car parking will be provided for conference visitors the main focus will be to provide suitable public transport provision to accommodate the movement of in excess of 4,000 people. Shuttle services are proposed and these would be accommodated at the South Western interchange in the Central Reading, which is considered acceptable.

7.74 The proposal will require a significant amount of public transport to be travelling along the A33 in between the site and Reading Town Centre, although the movement of people will be counter tidal to the peak flows the buses will need to return to collect additional passengers. These trips will be within the peak traffic flows which have considerable delays at present, and which will be worse by year 2021.

7.75 The number of bus trips required would be significantly less than those required for a football match but a proportion of buses will be required to undertake a return journey. A full capacity event will further increase delays significantly on the A33. As a result the returning bus trips would be unable to return in sufficient time to collect subsequent passengers. It is therefore apparent that the site would be reliant on the bus lanes proposed as part of the Mass Rapid Transit (MRT) to undertake return journeys.

7.76 The MRT scheme has commenced construction, but the current phase, between the application site and Junction 11, would not be of benefit to journeys between the application site and the town centre. Future phases would link between these two destinations and Local Enterprise Funding (LEP) funding has been secured, but substantial match funding is required to ensure the scheme can be fully built out.

7.77 The proposal includes the provision of 26 bus trips an hour for a two hour period in each of the peak hours. As the overall scheme is based on a high number of attendees traveling by public transport, it is essential that the applicants can source the required level of buses. It is been confirmed that further discussions have been conducted with Reading Buses on this matter and confirmation that they would be willing to enter into agreement in providing the required bus services to and from the site.

7.78 The day to day public transport provision and bus / coach services for football matches and conferences are fundamental aspects of this development to mitigate the impacts on the surrounding Highway Network, however adequate provisions have not been provided to meet the demand. This conflicts with the NPPF, which states that "*..developments should be located and designed where practical to…. give priority to pedestrian and cycle movements, and have access to high quality public transport facilities…..*" Therefore improved facilities must be provided and a recommended S106 obligation for transport is included to mitigate in this regard.

Access Arrangements

7.79 It is proposed that a new stepped and ramped access will replace the current steps at the northwest side of the site, connecting it to Green Park, the wider cycle network and Green Park Station when built. Steps are proposed that link to the Public Right of Way (PROW) route 27 into Green Park located alongside Costco. It is appropriate that no ramp is provided as it has been clarified by the applicant that a ramp would need to be 294m in length, due to the gradient.

7.80 Accesses into the site would be from the existing vehicle/pedestrian accesses on the A33 and the public cycle/footpaths within Green Park.

7.81 The proposed new internal road network is considered acceptable and the access and egress arrangements for the multi storey car park and residential Block 1 opposite has been altered to ensure that the main flow of traffic through the site would be given priority. This ensures that the residential movements and Green Wave bus services would have priority in travelling through the site on match days and during large events.

7.82 Drawing 32605/36 has been submitted illustrating a holding area for up to 8 cars entering the site, which would ensure that such vehicles would not conflict with supporters leaving the stadium, and that excessive vehicles are not waiting on the Hurst Way / South Oak Way roundabout obstructing the movement of football park and ride services and access / egress to Green Park.

7.83 The outline access arrangements for the residential properties have been provided and comply with design standards.

Junction Assessment / Trip Rates

7.84 The transport network has been assessed using a SATURN (Simulation and Assignment of Traffic to Urban Road Networks) Model updated to include Manual Classified Count Data, Permanent Automatic Traffic Count Data and RBC Bluetooth Data. This approach was agreed during the pre-application discussions and is therefore acceptable. Committed developments and their trip rates have been included in the assessment and TRICS data from the Reading Model has also been used and this is deemed acceptable. It is confirmed that a robust assessment has been undertaken.

7.85 A number of different size events have been modelled and the applicant has

included the provision of ramp meters at the bottom of Hurst Way to hold back traffic from the entering the congested Highway network. This proposal has been deemed acceptable in principle.

7.86 All identified trip rates have been assessed and are acceptable for the AM and PM peaks. However there remain a number of areas, detailed below, where discussions are continuing to resolve identified issues. The results of these discussions will be reported in an update report.

7.87 The impact of the development with a maximum capacity conference has been assessed with a 2-hour Arrival Profile. If two conferences were to take place at the same time, utilising the full capacity then the finishing times must be staggered to ensure that all vehicles are not attempting to leave at once. The Transport Officer has requested that actual staggered times / time differences will need to be stipulated within the Events Management Plan. This has now been submitted and is acceptable.

7.88 The outcome of the model assessment is that delays would occur at several junctions along the A33 Corridor summarised below:

7.89 *AM Peak Period* - Junction 11 will experience delays on the A33 Northbound approach resulting in an increased delay of around 204 seconds, or in excess of 3 minutes. This will have a detrimental impact on the flow of traffic heading into Reading and is likely to have a subsequent impact on the proceeding junctions along this route.

7.90 Clarity is being sought on trip rates for Junction 11.

7.91 *PM Peak Period* - Increased delays at the A33 / Imperial Way Roundabout are currently showing as being 89 seconds, or 1 minute 29 seconds heading Southbound and 73 seconds, or 1 minute 13 seconds on the left hand slip from Imperial way heading south onto the A33. The delay specified for the Imperial Way arm onto the A33 has not been confirmed through the submission of formal data, and this needs to be submitted.

7.92 There is concern regarding the potential conflict between an event and a football match. The applicant states (In technical note 32605_TN_036) that an events schedule could be provided to the FA and television broadcasters and events restricted to an earlier finish to avoid clashing with scheduled evening matches. However, based on the confirmation that a smaller event could result in a similar impact to a large capacity event further clarity is required on how conflicts between the two could be minimised.

7.93 It is evident from Blue Tooth data submitted by the applicant of A33 travel times that travel patterns on match days are significantly changed with the peak period travel time in excess of a standard day and markedly extended. The Transport officer has discussed linking the event Management Plans to annually collected Bluetooth data, along the A33 corridor to assess finish times of events and whether changes in the Event Management Plan could be undertaken. As the Event Management Plan makes no reference to Bluetooth Data the start and finish times must be agreed now. Amended Event Management Plans have now been submitted to state that no event taking place on the same day as a week day football match could finish later than 3.30pm so as to avoid the PM peak hour.

7.94 The following comment in the Technical Note is concerning: '*regular commuter users of Green Wave services who may be aware of infrequent large conference centre events are likely to use Mereoak and not REP on event days*'. Development

should not detrimentally impact the public transport that serves the site and it should therefore be ensured that the existing public transport can gain suitable access and egress. Discussions on this matter are ongoing.

7.95 Amended Event Management Plans have been submitted, which provide a breakdown of a varied number of events and the travel requirements for each.

Parking

7.96 The applicants have undertaken an assessment of the surrounding area to ascertain overspill parking that occurs on a match day. The survey recorded a difference of 431 parked vehicles within the agreed survey area, 1098 vehicles on a match day and 667 vehicles on a non-match day.

7.97 A further survey was undertaken by the applicant in the form of a questionnaire which was sent out to 4706 dwellings within the area, the area was pre agreed with RBC. The response rate was low (4.14%) and within these responses there was a mixed view of whether there are any parking issues and what type of measures would be required to mitigate any overspill parking on the streets of Whitley. However, if the proposed interchange is no worse than that agreed as part of the 2007 stadium expansion permission, still to be confirmed, then there would be no reason to change what had previously been agreed, which equated to a £100,000 contribution towards traffic management measures to be included in the Section 106.

Commercial Parking

7.98 The following tables shows the proposed parking breakdown:

Use	Parking Provision	No. parking spaces
246 bedroom Hotel	0.5 space/room	123 spaces
Ice Rink/Conference	-	100 spaces
5980 capacity Conference	Max RBC standard 1 per 7.5 seats. Implemented at 44% of maximum.	350 spaces
1855m2 Office	1:50m3 Implemented at 50% of maximum	20 spaces
Existing Millennium Hotel	-	153 spaces
Retained park and ride	-	100 spaces
	Total	846 spaces

7.99 The convention centre facility would accommodate a varied number of people and the Councils standards request a maximum provision of 1 space per 7.5 seats. The maximum number of seats that would be provided within the Main Ballroom (2,100 seats), the Mini Banquet Hall (1,400 seats) and ice rink (2,980 seats) equates to 5,980, the maximum provision required against RBC standards would be 797 car parking spaces. The applicant has stated that the proposed provision would be at 56% of this provision therefore equating to 450 spaces.

7.100 Ice rinks have no specific parking standard. The ice rink at Bracknell has been used as a comparison. That has 200 spaces, but has additional facilities, so the proposed 100 spaces is considered acceptable. It is noted that the ice rink on occasion could be used as part of a conference / exhibition space however it has been confirmed that if this occurs the ice rink parking will revert to conference / exhibition parking.

7.101 The 102 serviced apartments have been proposed with no car parking, which is

confirmed acceptable because of the proposed car club, cycle parking and on-site parking management.

7.102 A provision of 6 restaurants and café units and retail floor space have been proposed which would be located on the ground floor of the convention centre with no proposed car parking. The use of these facilities would mainly be ancillary to the overall development and any dedicated trips to these facilities are likely to be made outside of the peak demands for the surrounding uses, and could therefore share the parking provision which complies with national advice.

7.103 20 spaces are proposed for the office use, 50% below the Council's standards. It is proposed that spaces would be allocated to the specific uses and penalties / rapidly increasing parking charges will deter abuse of the other parking areas. This approach is accepted subject to a recommended condition for the submission and approval of a car parking management plan, which should fully detail the enforcement of car parking.

7.104 The existing Millennium Hotel currently has two dedicated car parks providing a total of 153 parking spaces. As part of the development of the public square a proportion of parking would be removed. This would be re-provided within the new car parks. 22 parking spaces (including 3 disabled spaces) would be retained close to the reception and would share access with the drop off and taxi rank.

7.105 The parking for the above uses would be located within the multi storey car park (616 spaces), the conference centre car park (129 spaces) and surface level parking (between 147 and 197 spaces) equating to between 892 and 942 spaces subject to the provision of the outside broadcasting area. This would result in the parking provision for the day to day operation of the football club being 96 which could then reduce to 46 subject to the outside broadcasting area being utilised on a match day as part of the stadium expansion. This provision has been confirmed as acceptable by RFC, and is therefore acceptable to RBC Transport.

7.106 A full deck of the multi storey (circa 100 spaces) could be allocated to the Park and Ride facility and a drawing has been provided illustrating the ground floor. This is deemed acceptable in principle, but only 99 spaces are currently shown and a revised plan is required.

7.107 The car park including the Park and Ride spaces would be managed in the form of vehicle registration recognition and increased parking charges and this is accepted subject to the submission and approval of a car parking management plan.

Residential Parking

7.108 A total of 830 dedicated residential car parking spaces will be provided to support the development. The breakdown is shown in the table below (table 3.2 of the Transport Assessment).

Table 3-2: Minimum residential parking requirements

Unit Type	Unit Number	Parking Standard	Parking Requirement
Studio	73	N/A	0
1bed	147	1 per dwelling	147
2 bed	281	1 per dwelling	281
3 bed	110	2 per dwelling	220
4bed	22	2 per dwelling	44
		Total	692
		Visitor Parking at 20% of residential parking	138
		Residential parking requirement	**830**

7.109 The National Planning Practice Guidance, March 2014 (NPPG) has shifted the requirements away from parking restraint and states "Maximum parking standards can lead to poor quality development and congested streets, local planning authorities should seek to ensure parking provision is appropriate to the needs of the development and not reduced below a level that could be considered reasonable."

7.110 The above residential car parking provision generally complies with the latest Government advice and is the acceptable in principle. The only deviation is that no car parking has been provided for the studio apartments. During pre-application discussions with the previous Transport Development Control Manager, it was agreed that "*it would be acceptable for the 54 proposed studio apartments to have no parking if some form of agreement were in place to control this.*"

7.111 Further information has been provided on the proposed parking controls and these include the following:

- A Controlled Parking Zone (CPZ) on the site where residents will be provided with allocated parking areas and permits.
- Guest permits can be issued to allow residents visitors to park. This can be limited to a set number per year e.g. 30 one day passes.
- Owners of studio apartments would not be eligible for a residents permit but could be eligible for visitor parking passes, which would be issued in limited numbers.
- Additional permits could be purchased however a sliding scale of charges, increasing as additional permits are bought, could be introduced to prevent abuse.

7.112 The Transport officer has confirmed acceptance of the above approach, but the full detail would need to be included in the car parking management plan.

7.113 The location of the residential parking for Blocks 1 to 7 would be within dedicated parking areas located at the ground level, the majority within the curtilage of each building. On street parking for visitors would be provided between the blocks. Access to the undercroft style car parks would be via a series of service roads which would spur off from the main internal access road and via a shared surface spine road which would run along the length of the central park area.

7.114 The undercroft parking layout generally complies with policy however a few of the car parks will be linked through an electronic gating system, the details of which would need to be provided at the reserved matters stage to ensure that adequate parking in accordance with standards could be provided.

7.115 Block 7 parking required provision is as follows:

House / Dwelling Type	Units Provided	Required Car Parking Provision
Studio	60	0 subject to on-site parking management
1 bed	72	72
2 bed	60	60
3 bed	4	8
Total	**196**	**140**

The proposal provides for a provision of 164 spaces along with 29 visitor spaces and this complies with policy which is acceptable.

7.116 The car parking layout and allocation of the residential units will be dealt with at the reserved matters stage.

Car Club

7.117 The Transport Assessment states that the development includes the provision of a car club and parking bays would be provided as part of the development. A revised drawing has been provided illustrating 4 spaces, the locations of which are considered acceptable. The provision of a car club would need to be secured through a Section 106 obligation.

Cycle parking

7.118 Cycle parking will be provided across the site with a large indoor cycle parking facility capable of holding up to 294 bicycles located in the basement of the Multi-Storey car park. These spaces are in the form of Sheffield type stands and provided with adequate manoeuvrability, these spaces are therefore acceptable.

7.119 A detailed drawing will need to be provided to show the further 200 spaces across the site. A condition is included above. Condition

7.120 A 'Readybike' docking station is to be re-provided on the site and the proposed location is acceptable.

7.121 This overall level of cycle parking proposed is in excess of that currently provided on the site and would be available as a shared facility between all the uses, which is deemed acceptable.

7.122 The proposed cycle parking for Block 7 is for the provision of 132 cycle spaces which is in excess of the required provision so in principle is acceptable. A revised drawing is required illustrating cycle parking to comply with the Councils minimum standards. A condition is recommended above.

7.123 Cycle parking for the remaining residential units will be provided separately within each block in accordance with RBC standards and addressed at the reserved matters stage. condition

<u>General Layout</u>

7.124 The proposed layout which is demonstrated by tracking plans, is acceptable.

7.125 Two taxi ranks are proposed and stacking space has been proposed for the taxi rank located adjacent to the multi storey car, to provide increased capacity and is therefore acceptable.

(v) Environmental Effects

7.126 The following is an assessment of a range of environmental effects in addition to transport and contamination, as set out above, against policy considerations.

Air quality

7.127 The emissions from traffic and the dust from construction have been assessed. The conclusion of the submitted report in the ES (Chapter 12) is that overall operational air quality impacts would not be significant based on impacts all being negligible. The Environmental Protection and Nuisance Officer confirms this conclusion.

7.128 Subject to recommended conditions for a dust management plan to be approved as part of the overall construction method statement, Environmental Protection and Nuisance are satisfied that any effects can be mitigated and managed through conditions and accord with Policy CS34. CONDITION

Ecology and Nature Conservation

7.129 Government policy on minimising impacts on biodiversity is set out in the NPPF paragraph 118, which requires local planning authorities to aim to conserve and enhance biodiversity when determining planning applications. The local policy (Core Strategy policy CS36) also requires development to retain, protect and incorporate features of biodiversity or geological interest found within sites.

7.130 The initial consultation response from the Environment Agency (EA) (in full in Appendix 3 below) identified that the original submission did not include adequate measures to properly address the risks and in particular did not include addressing the potential for additional shading of the Foudry Brook corridor, which could impact on the vegetation in the area. Further to review of Aspect Ecology's Ecology Technical Note, TN1 - Assessment of Shading Effects from the Development on Foudry Brook, dated 22 June 2016 the EA withdrew their objection on nature conservation grounds subject to conditions, as set out in the recommendation above.

7.131 Para 109 NPPF requires that impacts on biodiversity are minimised and that enhancement should be provided where possible. There are no international, national or local statutory designations on or adjacent to the site. There is moderate ecological value for bats. Other species have negligible or low ecological value. The wooded belt has low-moderate ecological value. The presence of invasive species (Himalayan Balsalm) will need to be removed. A Condition is included to this effect.

7.132 The Planning Statement identifies that any small loss through the reprofiling of the wooded belts and grassland will be compensated through new habitat creation and enhancement measures. There will be the provision of roosting and nesting areas for bats and birds, hedgehog domes and insect boxes. A condition is included.

Historic Environment

7.133 The site is not within or adjacent to any heritage assets. The Historic Environment Desk Based Assessment (Appendix 2.3 of Chapter 2 of ES) concludes that previous archaeological investigations at surrounding development sites have demonstrated that there may be high potential for significant buried archaeological remains within the application onsite. However, the site has been covered by landfill and

that archaeological monitoring related to more recent developments of Green Park and Madejski Stadium indicate that modern deposits of made ground may not have disturbed any archaeological stratigraphy below 1-2m of made ground within the proposed application area. Berkshire Archaeology has confirmed that as the site is located over substantial made ground no archaeological work will be required in this instance which accords with Policy CS33.

Noise & vibration

7.134 Adopted Core Strategy Policy CS34: Pollution and Water Resources states that "development will only be permitted where it would not be damaging to the environment through the air, land noise or light pollution.. and "proposals that are sensitive to the effects of …noise.. will only be permitted in areas where they will not be subject to high levels of such pollution, unless adequate mitigation measures are provided to minimise the impact of such pollution".

7.135 The submitted ES includes a qualitative assessment for noise and vibration arising from works and activities associated with the construction phase; Noise arising as a result of an increase in traffic flow on the local road network and from any fixed plant items associated with the Development; and noise from existing noise sources (road and football stadium) affecting future occupants of the Development.

7.136 Environmental Protection and Nuisance has confirmed that subject to appropriate mitigation, the effects, as defined in the ES are acceptable in accordance with Policy CS34. Conditions for an assessment of the current noise environment, for protecting the dwellings, a scheme for sound insulation for the convention centre, and noise assessment of plant are recommended above.

Socio-Economic

7.137 The ES includes consideration of the following topics in identifying the likely significant socio-economic effects of the proposed development:

- Changes in population numbers and structures;
- Changes in housing requirements;
- Changes in local retail and leisure expenditure;
- Changes in employment requirements;
- Demands on primary healthcare provision;
- Demands on primary and secondary education provision; and
- Effects on leisure and economic conditions through provision of Convention Centre facilities.

7.138 It is clear that that the proposed scheme would provide significant economic benefits to Reading and the wider area, as documented in the Economic Benefits Statement, including:

- Job creation – estimated as 800 FTE during the construction period, 904 FTE on completion (gross), and 560 indirect jobs
- £206.8m Gross Value Added (GVA) during construction period
- Average spend per day £136-141 increasing to £474-717 for overnight stays
- £815,000 Council Tax
- £12.7 million per annum expenditure by residents based on 772 economically active residents
- £41.5m GVA from employment floorspace
- Forecast convention centre revenue of £5.2-5.5 million
- Support to a range of businesses including hotels, restaurants, bars, shops, transport providers, and technical services such as audio visual and exhibition related.

7.139 Reading UK CIC identifies that Reading's Economic Development Plan sets out the need to harness the unique opportunities provided by major developments in the South Reading Corridor. South Reading includes some of the more deprived wards in Reading, including with regard to the level of skills and employment. This proposed development would provide an opportunity to develop and deliver comprehensive Employment, Skills and Training Plans which would benefit residents. An Employment, Skills and Training Plan for both construction and end user phases are recommended obligations within the Section 106 agreement. These are detailed below (section xi) and in the recommendations box above.

7.140 The NPPF identifies (para 42) that "*advanced, high quality communications infrastructure is essential for sustainable economic growth. The development of high speed broadband technology and other communications networks also plays a vital role in enhancing the provision of local community facilities and services."*

7.141 The application submission included a Broadband Strategy and the RBC ICT Technology and Communications officer confirmed the principles contained within it are acceptable. This Strategy is recommended as one of the documents to form part of the approved list.

7.142 The NPPF identifies that in terms of the social role of sustainable development it should support "strong, vibrant and healthy communities, by providing the supply of housing required to meet the needs of present and future generations; and by creating a high quality built environment, with accessible local services that reflect the community's needs and support its health, social and cultural wellbeing".

7.143 Adopted Core Strategy CS3, also addresses the need for major developments to "… demonstrate measures to enhance social inclusion in terms of access to housing, employment, services, community facilities, leisure, health, education, and other services and facilities" and that developments should "… contribute to the enhancement of local distinctiveness. All members of the population should be provided with access to good quality health, education and other social facilities. New housing development will be co-located with a range of accessible facilities, or appropriately planned and located to ensure that access to such facilities is provided."

7.144 As set out above in terms of access to jobs the proposed scheme has the potential to create a range of training opportunities and skills development through obligations secured through the Section 106. The completed development would also offer bring a number of job opportunities.

7.145 With regard to the supply of housing the scheme has the potential to provide homes for up to 1500 people, with the provision of affordable housing.

7.146 The Socio-economic chapter of the ES identifies that there is currently a shortfall of primary education places in the area, and although there is some capacity at secondary level this is currently concentrated in Reading Girls' School. It is accepted that mitigation would be required to address the impact of the scheme in this regard.

7.147 To determine the likely numbers of school age children from the proposed development the applicant has used the pupil product ratio identified within the Council's SPD on S106 Planning Obligations (2013). This generates (based on the original submission of a maximum of 633 units) 145 no. 4-10 year provision and 69 no. 11-18 provision requirement. It should be noted that that Council's Education Department is now using an updated set of ratio figures, which generates higher

figures, 220 and 118 respectively. However, the overall result is the same, which is that there would be a shortage of places at primary level, with a negligible effect on secondary level resulting from the proposed scheme.

7.148 Shinfield Parish Council (SPC) and other respondents from the public consultation have raised concern over the impact of the proposal on school places. SPC identified the need for additional capacity to be provided for through S106. However, as Education infrastructure is set out in the Council's Regulation 123 list[3] then Community Infrastructure Levy would be the only mechanism for delivering additional school places within the Borough.

7.149 It should be noted that the Scheme would generate a number of millions of pounds of Community Infrastructure Levy (CIL), which could be used for a range of infrastructure provision including education.

7.150 In terms of providing local services and support of the health, social and cultural wellbeing the Public Health Team identified, through their analysis of local census data, that the *"current population living near to the site have some indicators of poorer health and wellbeing than the local authority average and currently place high demand on services."*

7.151 Results of assessment presented in the ES, discussions with the South Reading Clinical Commissioning Group and comments received through public consultation highlight the shortage of GP surgeries in the local area and the operation of existing surgeries at significantly over capacity.

7.152 The Planning Statement identifies that there may be the opportunity to deliver a healthcare facility on site within part of an area currently identified for office space, located at one end of the proposed car park.

7.153 Discussions are due to take place with the CCG to explore this further, and the provision of D2 use community facilities including healthcare is included as a recommended heads of term within the S106. This contributes to meeting the requirements of CS9, DM3, and specifically SA1, which states that *"development will contribute to the provision of community services and facilities…..taking account of the socio-economic and environmental characteristics of South Reading."*

7.154 The proposed development would provide an improved retail and leisure offer and accessibility to the town centre through new bus services. The Convention centre and ice rink would provide a leisure facility and offer the opportunity for Reading to host live events.

7.155 The Planning Statement identifies that the proposed square is designed to host a range of outdoor events, such as farmers' market, Christmas markets and other cultural events, which would also contribute to enhancing social and cultural wellbeing in line with the NPPF, the adopted Core Strategy, and the RBC Cultural Strategy.

Townscape and Views

7.156 Chapter 7 of the ES assesses the likely significance of effects of the Development on the environment with respect to townscape (including for landscape) and visual effects.

[3] The list of infrastructure that CIL can be used to fund

7.157 It includes a detailed visual appraisal of the site and its surroundings, as also documented in the DAS. The approach was that because the ground plane of the site is well screened in relation to the wider townscape, due to the land use and surrounding vegetation and built form, the appraisal took account of the potential visibility of the new vertical built form. Specific locations for views to assess were agreed with RBC.

7.158 Although the conclusion presented is that "*partial views of Development would be likely to be obtained from the wider context, namely from within Green Park, the A33 and elevated locations to the east of the A33, the landscape to the south and glimpsed views from elevated land to the north of central Reading."* it is clear that the proposed scheme would be prominent especially from within Green Park. Control of the overall scale and massing, quality of materials and landscaping are therefore key to ensuring that the scheme fits within the context of the existing surrounding development.

7.159 A field study and desktop evaluation of the local townscape character within south-west Reading seeks to identify the existing townscape context. This concludes that the character lacks cohesion and a clearly identifiable core and that the development would provide beneficial townscape effects. This is identified as through the enhancement of the civic value of this part of Reading; creating a more prominent landmark when viewed from the A33.

7.160 The site comprises extensive areas of hard standing and a training facility, with vegetation structure limited to the embankments on the boundaries of the Site which comprise trees and scrub. The site is not subject to any landscape related designations not within or adjacent to a conservation are or listed buildings and their settings. The proposed landscape structure both in terms of new trees within the site, woodland blocks along the embankments and the open space through the site would offer the potential to positively contribute to the character of the Green Park area.

7.161 The submitted Arboricultural Impact Assessment identifies trees to be removed, with the majority on the northern boundary adjacent to the Foudry Brook in order to construct the revised pedestrian access. The Natural Environment Officer was satisfied that due to the value of the trees their loss could be mitigated with new planting. However, the Officer made it clear that such replacement and habitat enhancement would be required given its location along Brook Drive and on a designated Green Link (Policy DM17 of SDPD). Such enhancement should be mindful of the results of the ecology survey, i.e. that the Foudry Brook is a well-used bat route, has the potential for hedgehogs and had a previous slow worm sighting. The Natural Environment officer confirmed acceptance of the proposals with regard to landscape/ trees subject to a number of conditions for both the outline and detailed areas as included in the recommendation above.

Water Environment

Flooding

7.162 A flood risk assessment was submitted (FRA) included as Appendix 9.1 of chapter 9 of the ES. At the time of writing the ES the Applicant stated that "*The EA is currently unable to provide the results from detailed hydraulic modelling of the 0.1% Annual Exceedance Probability (AEP), equivalent to the 1 in 1,000 year return period AEP flood event, although this analysis is underway. This is the event that defines Flood Zone 2. Until this analysis has been completed and the data is made available, the current flood risk classification (Flood Zone 2) will be applied to the Site to ensure that a precautionary approach has been used for the assessment of likely significant effects of the Development."*

7.163 Topographic survey information for the Site indicates that the existing site levels are between 45m and 47m AOD. Therefore the 1% AEP + climate change (CC) flood level is approximately 5.9m below existing ground levels. This indicates that the 1% AEP + CC flood level generated by the Foudry Brook will not directly affect the Site. The ground raising, associated with previous development phases, has increased the Site's resilience to flooding and the FRA shows that the risk of fluvial flooding is low.

7.164 As the site is in Flood Zone 2 a sequential test was required in accordance with the NPPF. The EA also confirmed the requirement for a sequential test to be undertaken to demonstrate that the proposed development could not be accommodated on an alternative site at a lower risk of flooding. The submitted sequential test, which forms part of the FRA, is considered to have been undertaken appropriately and demonstrates that there are no other suitable sites within an area of lower flood risk. It should be noted that the NPPF does not require a further exception test to be undertaken for this vulnerability of development for this flood zone. Therefore the test is considered to have been passed.

7.165 The EA has advised that any development has to have a safe egress and access route to accord with requirements of para 103 of the NPPF. The submitted FRA confirms that this would be the case.

7.166 The proposed site is not in a high risk site and will not increase flooding downstream. This accords with RBC's adopted Core Strategy Policy CS35 states that "…planning permission will not be permitted in areas where there is a high risk of flooding, if development will increase flooding downstream or if it reduces the overall flooding capacity of the floodplain."

7.167 The ES identifies that the risk of flooding from groundwater and the water supply infrastructure is low. In terms of the risk from the foul water sewerage networks, the applicant has confirmed that this is limited by following the appropriate standards and guidance during the design process and by undertaking consultation with the sewerage undertaker Thames Water) with regard to the capacity of their Systems, to ensure the rate of discharge from the site is in accordance with the capacity of the public systems. This consultation, the applicant advises, is ongoing.

7.168 The proposed surface water management strategy aims to collect, attenuate and then convey surface water with the aim of mimicking the performance of a natural system and minimise the risk of flooding both on site and elsewhere. The receptor for surface water discharges is the Foudry Brook. The surface water drainage system has been designed to reduce the run off of the site down to greenfield run off rates or as close as reasonably practicable, improving on the current run off rates from the site which is generally hard standing. The system has been designed to allow for a 1 in 1% Annual Exceedance Probability (AEP)[4] plus a climate change allowance (in this instance an increase in rainfall intensity of 30%).

7.169 RBC's Sustainable Urban Drainage Consultant identified that further reductions in flow rates could have been achieved if several surface catchments had been combined to a single controlled outfall. However, they confirmed that "given the large reduction in peak runoff rates the proposed arrangement for reducing peak

[4] The chance of a flood of a given size (or larger) occurring in any one year, usually expressed as a percentage. For example, if a peak flood discharge of 500 m3/s has an AEP of 5%, it means that there is a 5% chance (i.e. a 1 in 20 chance) of a peak.

flows is acceptable." This is subject to a number of conditions as included in the recommendation above.

7.170 It is accepted that infiltration devices and detention basins are not suitable for this development due to the geology, site history and space constraints. However, the Consultant notes that green roofs are not proposed as a means of controlling surface water runoff at source because of '*budgetary constraints and risks associated with waterproofing and loading on the structures*' (Section 5.2 of the Drainage Design Report). That Report does keep open the option for using green for future stages of the design, and it is recommended that they are adopted as a means to manage surface runoff. Consideration should also be given to the use of (vegetated) rills and urban bio-retention features. Conditions are recommended for the submission and approval of a Surface Water Drainage Strategy, and implementation in accordance with the approved details; and a whole life maintenance plan.

7.171 Water quality is covered under the 'Water Environment' and 'Land Contamination' chapters of the ES. An assessment of ground water is included under section (iii) Land Contamination above.

Wind Microclimate

7.172 The BRE were appointed by RBC to provide a technical response on wind microclimate and reviewed Chapter 15 of the ES, the associated appendices and figures, non-technical summary and the planning statement, and subsequent further information submitted by the Applicant to clarify certain points.

7.173 The initial response from BRE sets out that the desk based study provided by the Applicant is qualitative and the findings are therefore the opinions of the author. The BRE officer questioned the validity of the claim that a desk based study would be sufficiently accurate in this circumstance and had concerns over the conclusions made.

7.174 Further to additional information and clarification being provided by the Applicant the BRE had ongoing issues in particular that there was a reliance on the wind shelter from the outline element of the overall scheme for the detailed elements. Their view was that wind tunnel testing was required.

7.175 A further response from the Applicant clarified that they agreed with the BRE that the development should be wind tunnel tested, including the residential blocks, prior to detail approval of the residential elements of the scheme, but that the development of detailed mitigation arrangements was something that should be left to that stage of work. The Applicant accepts that although unusual to depend on the outline scheme for wind protection they state that *"There is no intention to deliver any aspect of the scheme in isolation: given the level of investment that the Applicant is privately funding to deliver the convention centre and associated facilities, securing and implementing the residential development is vital from an economic and viability point of view."* (File note: Environmental Wind: Response to Updated BRE Review of Wind Microclimate Study, dated 28th Sept 2016).

7.176 The Applicant also provided further clarification regarding specific technical terms which had been used in the assessment, which BRE has confirmed is acceptable. The BRE also advised that suitably worded conditions be required to address the requirement for wind tunnel testing to ensure that the scheme complies with Policy DM1, which states that with regard to adaptation to climate change "New *buildings shall be orientated to maximise the opportunities for both natural heating and ventilation and reducing exposure to wind and other elements;…"*

(vi) Housing Mix

7.177 Policy DM5 requires that on new developments for 10 or more dwellings outside the central area and defined district and local centres, 50% of dwellings will be of 3 bedrooms or more, and the majority of dwellings will be in the form of houses rather than flats, having regard to all other material considerations. As the delivery of the scheme as a whole with all the commercial facilities is reliant on a high density flatted development in the form of a limited number of blocks the application of this policy is neither viable nor practical in this instance. Officers are of the view that the benefits of the commercial elements of the scheme outweigh the need to make a decision in accordance with the policy.

(vii) The design, layout and visual impact on the character and appearance of the area

7.178 Design is a key element of national planning policy and para 56 of the NPPF states that "The Government attaches great importance to the design of the built environment. Good design is a key aspect of sustainable development, is indivisible from good planning, and should contribute positively to making places better for people."

7.179 At the local level the key policies are Core Strategy Policies CS4 and CS7, which relate to density and design. CS4 requires that developments should be of a scale and density related to its level of accessibility or upgraded accessibility. CS7 states that all developments must be of high quality design that maintain and enhance the character and appearance of the area of Reading in which it is located. The components of design include: Layout, landscape, density and mix, scale, height and massing, and architectural detail and materials. These are to be assessed to ensure that the development makes a positive contribution to the urban design objectives of character, continuity and enclosure, quality of the public realm, ease of movement and permeability, legibility, adaptability and diversity. The DAS includes a full assessment of the proposals against each of the criteria of the policy (Section 12).

7.180 Prior to the submission of the formal application there were a number of pre-application meetings where design options were presented by the Applicants to officers, and a process of design iteration took place, which examined matters including building heights, relationship of blocks, and elevational treatments of the convention centre/ hotel serviced apartments block, and the multi-storey car park. Aligned with this were discussions regarding elements of the design and layout related to amenity issues. In addition the applicants undertook a number of consultation events, a summary and results of which are documented in the submitted Statement of Community Engagement. Through this consultation the Applicant identified the main concerns being: Transport and parking; the Garden of Remembrance; Cycle paths and cycle parking provision; Affordable housing, and social infrastructure.

7.181 The overall design evolution is documented within Chapter 4 of the Environmental Statement (ES) and within the Design and Access Statement (DAS) and DAS Addendum (received June 2016).

7.182 A number of elements drove the evolution of the design and layout of the proposals:

1) The desire to deliver an internationally/ nationally important convention centre, with a range of supporting accommodation and commercial facilities, intended to form, along with the existing development at Madejski Stadium a

cultural hub within south Reading. The applicant has advised that due to the significant investment required to develop such a scheme, and the timescales for it to become viable, led to the inclusion of an enabling development, i.e. a significant residential scheme developed at a relatively high density to achieve numbers of units that will assist the viability of the overall scheme.

2) The understanding that public transport would be a critical element of and provide a key role in delivering a sustainable and viable convention centre. Therefore the public transport interchange forms a significant and central part of the scheme adjacent to the convention centre, which became a key driver of the evolution of the overall Masterplan. In addition it was recognised that there would need to be enhancements to the pedestrian and cycle routes into the site.

3) Constraints posed by the land being over former landfill which limits opportunities to alter the development platform, and disturb or encroach on the embankments. Inevitably that means that any development must seek to minimise disturbance of the landfill and blocks of flats rather than individual houses provide the most effective and efficient solution

4) The vision of creating a distinctive character and a new urban quarter for Reading.

5) Integration of key viewing corridors into and out of the site.

7.183 The ES identifies that from discussion with potential convention centre operators there was a strong desire for the convention centre and hotel to be within one unified building. A taller landmark building, originally included in the overall design, was removed following views from RBC Officers.

7.184 The Planning Statement sets out that (Para 6.91) the *"overarching design approach has been to ensure that the proposals have a functional role in meeting the needs of the Club and its supporters whilst embracing the broader scope of delivering a development that is iconic to Reading and creates a sense of place through the interaction of the individual buildings along with the public and private areas."* It is intended to be *"…visually attractive to complement surrounding land uses and reinforce local distinctiveness."*

7.185 The DAS explains:

- The design principles and concepts applied to the proposed development;
- The steps taken to appraise the context of the proposed development and how the design has taken this into account;
- The applicant's approach to access; how Local Plan policies have been taken into account; consultation undertaken in relation to access issues; and how the outcome has informed the proposed development.

7.186 For the outline parts of the scheme the DAS provides details on proposed land uses, amount of development for each use and areas where access points to the development will be situated. For the detailed application components there are sections with details on: Use and Amounts; Scale: Building Heights and Massing; Access and Movement; Layout; Appearance; and Landscape.

7.187 The DAS sets out design principles that future Reserved Matters Applications or conditions discharge applications are intended to be in general compliance with. Additionally there are a set of Hybrid Parameter Plans for land use, movement, building heights, ground levels, finished floor levels and boundaries, and Masterplan, which any reserved matters applications are intended to comply with.

The DAS also includes images and drawings which are shown for illustrative purposes only.

7.188 The detailed design for each key element of the scheme is documented within sections A-F of the DAS supported by ES, Planning Statement, plans and documents. At the north eastern end of the site, closest to the Stadium is the convention centre and ice rink along with the hotel, serviced apartments and A use classes. The overall design approach was to achieve a building with the elements within a unified appearance. Thus as a result of the design evolution the final proposed design is a "sinuous form" with the use of metal fins and louvres which wrap around the public facing elevations to the Square and the public transport interchange. The ice rink is expressed differently and clad in a different material with aluminium composite blue cladding and the large scale signage for the convention centre and ice rink. The main bulk is 8 storeys high, with an element of the hotel at 9 storeys.

7.189 Also facing the proposed Royal Elm Square is residential block 7, which forms part of the detailed area. This is in a quadrangle with central amenity space and is up to 7 storeys, with lower linking sections facing the central Royal Elm Gardens and to the Green Park to the north. The proposed materials and form seek to create a link between the commercial elements and the residential blocks within the outline area.

7.190 The residential blocks (1-6) within the outline part of the site, each comprise a pair of buildings around central amenity space. The appearance principles identified in the DAS propose a consistent material (brown and grey brick), with glazing panels at roof sections (described as 'beacons'), across the elevations to create what the applicant describes as a "family" of buildings.

7.191 The final proposed building is a 6 storey multi-storey car park, which has front elevations to the Royal Elm Square and Gardens. It is proposed with a curved form to echo the design of the existing hotel. It includes a green wall façade to the Royal Elm Gardens and the south-eastern elevation is proposed with vertically banded fabric onto which graphics could be printed and displayed.

7.192 The NPPF recognises (para 62) that when appropriate a LPA should refer major projects to design review and that LPAs should have regard to the recommendations from design review panels. On 12th May the Applicant and RBC officers met with the Design Review South East Panel. Specific matters that officers asked the Panel to consider were as follows:

- Convention Centre/ Hotel/Service apartments – Professional views on the design and architecture (including materials).
- Public Realm – Commentary on whether this provides sufficient and appropriate setting for the buildings. Does it provide a suitable design to provide a sense of place? (In the context of Core Strategy Policy CS7)?
- Car park – Is the elevational treatment an appropriate solution to the bulk and overall scale of the building?
- Character of area – How well does the proposed scheme blend in with the surrounding development within Green Park, taking into account views from within the Park?
- Residential blocks (outline scheme – blocks 1-6) – Commentary on the layout, siting, height and massing, including the proposed courtyards, in the context of amenity considerations (Sites and Detailed Policies DM4) including daylight/ sunlight, privacy, & overlooking.
- Landscape strategy and design for the banks – Is this sufficient for the setting and also as an arrival point, when accessing from the steps by Block 7 and the west of the car park?

7.193 The following is a summary of the key points set out by the Design Review Panel:

- Commend the proposals for the main square, public transport hub and park.
- Further examination is needed of the quality and quantity of connections, particularly for pedestrians and the sense of arrival at the site for all modes of transport.
- A more sophisticated solution is needed for the interface between the square and park.
- Urge that the [perimeter] bank be treated as an asset to the scheme rather than a constraint or buffer.
- Green Park is an impressive neighbour and the more this scheme can integrate with it and complement it the better.
- The convention centre building could be a fabulous addition to this ensemble with a beautiful sculptural form that could be a symbol of Reading provided that its design is not compromised in the detailing or through the procurement.
- This is an extraordinary site but the current residential proposals are failing to recognise the potential. The principle of residential use on this site is sound but we would encourage a more visionary and dynamic approach to the creation of this new neighbourhood. [Officers' understanding is that this related to potential benefits offered by the bank, and the potential for a range of design treatments for the outline residential blocks].

7.194 The other main commentator on design was Thames Valley Police (TVP) who originally submitted an objection regarding a number of areas of concern with the design and its impacts on crime prevention and safety.

7.195 The applicant amended the design in response to the matters raised by the Panel, TVP and RBC. A DAS Addendum and covering letter (received 29th June 2016) document the changes, which can be summarised as follows:

- Inclusion of ideas of possible architectural treatments of blocks 1-6 in response to Panel's view that there needed to be more architectural variety.

- Revisions to Block 7 (detailed part)–
  (i) Separate entrance created for the refuse bins and routes for moving bins through the car park without interfering vehicular movement in response to TVP concern
  (ii) Front wing of the block (i.e. to the public park) was reduced in height and a unit removed at second and third floor to create a further gap in this elevation to allow more light into the courtyard.
  (iii) Layouts and openings revised to increase privacy.
  (iv) Translucent glazing panels introduced at stair cores, on elevation to block 6, to avoid overlooking into the adjacent block.

- Revisions to Blocks 1-6 (outline part)
  (i) Corner of Block 4, and Block 2 reshaped to allow continuation of views along the park.
  (ii) Block 3 reduced in size and reshaped to allow views out from the park.
  (iii) 4 bedroom triplex units removed from Block 5 to allow views out from the courtyard to Green Park
  (iv) Separate entrance created for the refuse bins and routes for moving bins

(v) Diagrams to demonstrate how fenestration of blocks, internal layout and walls at the back of roof gardens can be arranged to help maintain privacy of each unit and amenity spaces.

- Public Realm
  (i) Amendments to the step/ramp link access from Green Park to the west – widening of the terracing and additional planting.
  (ii) 'Floating Decks' – Structures 'hanging' over the embankments
  (iii) 'Podium Deck' at the southernmost tip of the site, with a cantilevered platform beyond.
  (iv) Amendment to Park and Square interface
  (v) Landscape improvements to enhance the Northern Way approach – opportunity for a local landmark or welcoming signage to support a sense of arrival and place.

7.196 Following these changes TVP submitted a sustained objection. The resulting work was the preparation of a Counter Terrorism Planning Guidance and a Security Strategy Plan to incorporate further amendments. These satisfied TVP's requirements and enable the scheme to align with the NPPF in *"creating safe and accessible environments where crime and disorder and the fear of crime do not undermine the quality of life or community cohesion."* These documents form part of the recommended list of approved plans.

7.197 Officers consider that the scheme has responded well to the matters raised and provides for a good quality design in accordance with policies CS4 and CS7. However, as this proposal is a hybrid application, i.e. part outline and part detailed it is important that the quality of materials, appearance, public realm etc is maintained at a high standard throughout the whole scheme, and this was one of the key aspects that was identified by the Design Review Panel. Paragraph 59 of the NPPF sets out that LPAs should consider using design codes where they could help to deliver high quality outcomes. Therefore, one of the recommended conditions is to develop a detailed design code, which will provide a detailed framework for future phases of the residential blocks and the associated central park area. An outline of what this will cover is recommended for approval at this stage along with the requirement to provide a detailed design code document prior to the submission of any reserved matters applications. It should be noted that the Applicant has also confirmed that they would be willing to undertake a further local design review as part of the evolution and consideration of future reserved matters applications.

7.198 As part of the environmental strand of sustainable development the NPPF, supported by local policies CS1, CS2, SD1, DM1, and DM2 requires development to *"mitigate and adapt to climate change including moving to a low carbon economy."* The submission information includes a full Sustainability Statement and Energy Statement, which have been reviewed by the RBC Sustainability Officer.

7.199 It has been confirmed that the sustainability approach follows local policy requirements and guidance in the RBC's SPD. With regard to energy requirements community heating, and potentially CHP combined solar PV are assessed as preferred options to achieve higher CO2 reductions; the target being a 20% reduction beyond the requirements of Part L of the Building Regulations. Conditions are included above which require the submission of further details pre-commencement

7.200 With regard to the BREEAM targets these are:

- The Hotel BREEAM target rating is Very Good (60.51 %)

- The Retail BREEAM target rating is Very Good (60.81 %)
- The Convention is now targeting a BREEAM rating of Very Good (60.46%)

However a condition is recommended above requiring a higher score between Very Good and Excellent.

7.201 The submitted approach is considered to accord with policy, but recommended conditions will ensure that further detail is submitted at the correct stage of development.

(viii) <u>The Amenity Impacts for Proposed Residential Properties</u>

7.202 The key guiding policies are DM4: Safeguarding Amenity and DM10 Private and communal amenity space. Policy DM4 identifies a number of matters which would affect amenity and each element is discussed and assessed in turn below:

Sunlight and Daylight

7.203 This is addressed in Chapter 14 of the ES and uses the BRE Guide[5], which provides advice on site layout to achieve good sunlighting and daylighting both within buildings and in the open space between them, alongside the British Standard Code of Practice for Daylighting.

7.204 The assessment concludes that the majority of habitable rooms will be day lit in accordance with the target criteria of the Guide, and that any adverse effects are negligible and expected levels within a high density flatted scheme. Similar conclusions are presented for sunlight availability. With regard to sunlight levels within amenity areas these will be reduced to the northern blocks.

7.205 The author of the above BRE Guide was commissioned by RBC to review the submission within chapter 14 of the ES and the accompanying appendices. Following his initial comments amendments were made to Block 7 (within the detailed part of the scheme) and to the outline block siting.

7.206 The response is included in full in Appendix 3 below. The initial response raised some concerns summarised as follows:

7.207 Block 7 (detailed) - The level of daylight/ sunlight provision within the block would not be unusual for a large residential block in central Reading for example, but on an unconstrained site it would have been expected to be better than this.

7.208 Blocks 1-6 (outline) – A detailed assessment cannot be carried out. The ES has analysed a small number of points and it is not clear where these are. A more comprehensive array of points would be required. A condition could be included that a given percentage of rooms should meet daylight and sunlight guidelines in British Standard.

7.209 Courtyards – For blocks 1-3 the level of sunlight would be good. For blocks 4-7 the level of sunlight would not meet BRE recommendations and the private gardens to the perimeter of Block 7 would receive little or no sunlight throughout the year.

7.210 Further discussions were held with the Applicant and officers made some suggestions as to ways in which the scheme could be amended to improve on the daylight/ sunlight provision. Adjustments were made to block 7 to reduce the height of the linking block (facing Royal Elm Park) and the introduction of a gap (by

[5] Site Layout Planning for Daylight and Sunlight: A Guide to Good Practice Second Edition, by Paul Littlefair BRE, 2011

removing a couple of upper floor units), as documented in the DAS Addendum. Alongside these amendments were an amended Chapter in the ES and the accompanying technical appendices (received 6th July 2016). The BRE reviewed this amended information and concluded that the daylight and sunlight for Block 7 is similar to the previous scheme. For Blocks 1-6 the advice was that a careful design, specifically the internal layout and location of balconies, should enable a good level of daylight and sunlight to be achieved.

7.211 With regard to the courtyards the new massing of block 7 now meets sunlight standards for the courtyard, but the gardens around the perimeter would not. For blocks 1-3 sunlight levels would be good, but for 4-6 these would still below standard.

7.212 With regard to the outline blocks a condition was recommended to require a certain level of daylight and sunlight to be achieved, to be addressed as part of the massing of the blocks at detailed stage. The Council's Environmental Protection and Nuisance Officer (Private Sector Housing) also advised that an informative be attached to ensure that the Applicant is reminded that the Council has a duty under Part I of the Housing Act 2004 to keep housing conditions within the Borough under review and to investigate where there is evidence to suggest a hazard to the health or safety of occupiers may exist, which includes with regard to light.

Privacy and Overlooking

7.213 For detailed Block 7 officers raised some concerns over some units in the corners facing the courtyard and the potential for these to create issues of loss of privacy. The response from the Applicant was to remove some units on the south-eastern corner and to amend the layout and window openings, including recessed windows.

7.214 With regard to the outline scheme for Blocks 1-6 it is the intention to fix parameters at this stage including siting of the blocks. Some of the relationships between blocks raised concerns for officers with regard to privacy and overlooking, in particular the proximity of Blocks 3 and 4 at the end of the site. This area was redesigned by the Applicant and has not only improved the relationship between those blocks, but has introduced a better gap and alignment of blocks enabling improved views from the park towards the south west. The DAS Addendum (pgs 26-27) identifies some illustrative examples of internal layout, which could be used to minimise the loss of privacy, as well as walls to the proposed triplex units roof gardens, intended to prevent overlooking. These aspects would form the basis of principles to be set out in the proposed Design Code.

Visual Dominance

7.215 The amended scheme has slightly reduced the height and introduced a gap for part of Block 7, and for Blocks 1-6 the finger block of triplex units (to Block 5) has been removed and Blocks 3 and 4 have been redesigned/ reconfigured, along with the reshaping of Block 2. These measures have improved some of the dominance/ overbearing effects of the original submission. For Blocks 1-6 this would be further enhanced through the Design Code.

Noise and Disturbance

7.216 The national and local policy framework seeks to ensure that developments are not be subject to noise which gives rise to significant adverse effects which would impact on health and quality of life. Adequate mitigation measures should be provided to minimise the impact of such pollution (para 123 NPPF, Core STRATEGY policy CS34: Pollution and Water Resources).

7.217 Chapter 13 of the ES deals with noise and vibration. It states that the *"The noise climate [at the site]…. is dominated by road traffic on the M4.."* The proposed

convention centre is the driver for this scheme and the key issue is the impact of the proposed convention centre use on the adjacent residential use. The Environmental Protection and Nuisance Team has requested a number of conditions; 1) Appropriate ventilation measures to enable residents to have a comfortable living environment without the need to open windows; 2) Detailed noise assessment of the Convention Centre; and 3) Sound insulation measures for the Convention Centre. These are included as recommended conditions, along with hours of use. With regard to blocks 1-6 the day-to-day issues of transmission of noise between dwellings will need to be considered in the detailed layout. The principles would be included in the Design Code.

Artificial Lighting

7.218 The effects of the lighting on the residential blocks from the Public Square and from the multi-storey car park use (including headlights) would need to be carefully controlled. A condition is recommended which would require the submission and approval of a detailed light spill/lux plan. This would need to accord with the principles set out in the Applicant's Submitted External Lighting Strategy and the advice within Guidance Notes for the Reduction of Obtrusive Light, Institution of Lighting Professionals (2012).

Vibration, Dust and Fumes and Smell

7.219 No vibration nor dust effects are anticipated as a result of the operation of the proposed scheme. The ES refers to mitigating the effects during the construction phase and a Construction Environmental Management Plan is recommended as a condition.

7.220 Conditions are recommended to mitigate against the effects of smells and fumes.

Crime and Safety

7.221 This is addressed above. National Planning Policy Framework 2012 (Part 7, Sect 58; 'Requiring good Design' and Part 8, Sect 69; Promoting Healthy Communities') where it is stated that development should create *'Safe and accessible environments where crime and disorder, and the fear of crime do not undermine quality of life or community cohesion'; and Reading's planning policy Reading Central Areas Action Plan 2026 section 5.27 " It (the development) should provide continuity and enclosure with a high degree of active frontages. It should consider safety, security and crime prevention, which could include Secured By Design principles.*

7.222 The high density scheme does not fully comply with policy with regard to all the above elements, and some would affect residential amenity. However, it would still provide a high quality scheme where further detail would be developed as part of the recommended Design Code, which would need to be in place before the submission of any future Reserved Matters applications. This has been balanced against the significant economic benefits that this national/ international scheme would bring, as detailed below.

(ix) <u>Provision of leisure/ open space</u>

7.223 The key policy framework at the local level is set out in the Core Strategy, policies CS29 & CS30, supported by the Open Spaces Strategy (2007) and in the Sites and Detailed policies Document, Policy DM16. There is also an RBC playing pitch strategy, which is currently being updated. Combined, these require that all new development should make provision for open space needs through on or off-site provision or through contributions. For residential developments of 50 units or more new provision will be sought on site. Policy DM16 sets out guidance on the amount and type of open space to be provided.

7.224 In terms of new public open space the Open Spaces Strategy states for very large developments, the provision should include:

- A new local park (minimum area of 1.0-2.0 ha)
- Open space, which is integrated and not overly fragmented;
- Linked to adjacent local communities;
- Accessible to the general public and to people of all capabilities;
- Not severed by roads;
- Appropriate, in that it satisfies the most urgent local need, whether formal children's play provision, youth facilities, sports grounds, green links, or informal landscaping

7.225 The proposed development includes for a public square (Royal Elm Square) as a focal point for the proposed development and the existing Madejski Stadium. All the main attractions of the development would face the square, which would include an area capable of accommodating large crowds and temporary events (such as markets). This would include trees, benches, lighting, LED display and information boxes and benches and terraces for the proposed cafes and restaurants. At the centre of this space is a proposed landmark – The Spire; a 26.5m polished steel needle, which would have lighting within it projecting on to the surface below. This would provide a recognisable feature and an element of sculptural public art. As well as detailed drawings the DAS includes a range of illustrative images and design principles for materials, signage and the Spire. Leisure confirmed that this would provide for a high quality focal point for the development and the Design Review Panel also supported the overall approach for this area.

7.226 The proposal also includes a linear park (Royal Elm Gardens) 300m long, which is an area of open space leading from the Square between the proposed blocks. Part of this is within the detailed application (first ca 100m) between the proposed residential block 7 and the multi-storey car park, and the remainder in the outline area.

7.227 The DAS includes details for the first section. At the Royal Elm Square end the Gardens includes a lawn area and beyond this the land rises up (due to the existing land form, which would largely need to remain intact because of the capping layer to the landfill). Two banks of planting create a green edge to the Square which the Applicant considers provides differentiation between the local residential amenity space and the more public Square. Beyond this there is a further level change and another lawned area. Within this section is the retained Garden of Remembrance. Front doors and core entrance to Block 7 and entrances to the car park and cycle parking would provide active edges.

7.228 The DAS includes an illustrative layout which shows seating, pathways, planting and ventilation flues (P239) and detailed section and plan (pgs 244-245, also submitted as a proposed plan). Detailed landscape layout plans have also been submitted (RG-L06-Sheets 1 to 6, subsequently amended)

7.229 For the outline area the DAS includes a section on hybrid masterplan design principles, which includes open space amount and distribution, public and private realm principles.

7.230 The concerns raised by Leisure are as follows:

- Royal Elm Gardens would be too small and fragmented to provide meaningful space to serve the residents and does not meet the requirements of the Open Spaces Strategy;
- No information has been provided about the proposed Local Equipped Areas for Play (LEAPs) or Local Areas for Play (LAPs) other than their locations, and no Neighbourhood Equipped Areas for Play (NEAPs) mainly intended for older children, are proposed.
- The LAP proposed within Block 7 would be too small to serve the needs of the occupants and could cause noise and disturbance. As a minimum access controls are recommended to control/ restrict evening use by youths.
- No outdoor sports facilities are proposed.
- The relocation of an indoor pitch ('the Dome') further reduces opportunities for sport.
- To safeguard users of the Memorial Garden at least two entrances/exits need to be provided. [An amended plan has been requested].

7.231 As referred to above, a DAS Addendum was submitted by the applicant following the first round of consultation responses, and with respect to leisure and open space included a number of amendments as set out in paragraph 7.195 above. In addition evidence of the likely profile of residents was included. This research, undertaken on the socio-economic composition, indicates that there would be high proportions of children under 5 living in the Madejski Stadium development.

7.232 Although the amendments have not addressed concerns regarding quantum and type of provision the applicant has sought, in balancing the requirement for a high density scheme as an enabler to the convention centre, to provide a level of open space/ play provision, which would provide a comparable level of provision to other high density schemes.

7.233 Leisure has confirmed that the revised landscape proposals for the interface between the Royal Elm Square and Gardens goes some way to addressing the need to create a welcoming and defensible entrance into the Royal Elm Park.

7.234 Within the outline area of the proposal no detail has been provided for the proposed LAPs within Blocks 1-6, nor the LEAP. Further detail would form part of the reserved matters, which would need to accord with principles established at this outline stage. It is recommended that this be included as an element of the design codes document, a condition for which is recommended above.

7.235 The proposed scheme would involve the relocation of the full sized outdoor artificial pitch (used solely for Reading Football Academy use), to the Club's new training and academy facility at Bearwood Park, Sindlesham.

7.236 The indoor Academy Training Centre known as the 'Dome' has an astro turf pitch which is available to hire by soccer schools, community groups and the public. This would be lost to the site as a result of the proposed scheme, but it is proposed to relocate this to Forest School in Wokingham, and the application being considered by WBC is at an advanced stage.

7.237 Sport England (SE) has an existing objection to the Royal Elm Proposal, as it would result in the *"loss of a playing pitch"*. They requested further information from the applicant, as follows, to be able to assess it against their Playing Fields Policy[6]:

- Details of existing community users of the playing field
- Details of the replacement location
- Justification for the alternative location
- Evidence of why development is needed

7.238 The applicant provided a thorough response to the above in June 2016 and since that time there has been ongoing liaison between SE, the applicant, the FA and RBC regarding the detail of the Wokingham application, to which SE has also objected.

7.239 This has centred on ensuring that the activities which currently take place at the dome would not be adversely affected, and that these could be accommodated in the replacement facility. It has been made clear that current access conditions with regard to physical, operational and costs would need to be replicated in accordance with SE policy. Clarification has also been sought that the replacement facilities would be provided before the loss of the 'Dome' and there is ongoing discussion as to the mechanism for achieving this.

7.240 Further information will be provided in an update as to the progress on this. However, notwithstanding SE's objection, and the requirements necessary to enable a withdrawal of SE's objection against SE Policy, there is also concern expressed at the local level by RBC Leisure. They consider that the re-provision of facilities would not effectively serve Reading's local demand of both school and community, and that the capacity of alternative locations, presented by the applicant for accommodating displaced and new users, would be limited.

7.241 In the light of matters raised regarding open space provision combined with the loss of the pitch within Reading means that there is the need to provide additional play and artificial pitches in the locality for displaced and new demand.

7.242 The applicant accepts that the open space provision is below policy compliant level and has agreed to a recommended Section 106 contribution towards sports and play provision close to the site. This is included as a recommended Heads of Term above. It is considered that this would provide suitable mitigation for the scheme.

(x) <u>Affordable Housing</u>

7.243 The Planning Statement indicates that the Club recognises, "*the pressing need for affordable housing within Reading and is committed to making an appropriate level of contribution to assist in addressing the issue. … in very broad terms the Club is prepared to offer either a financial payment in lieu of providing affordable housing off site (Option 1) or, if an offsite option is unacceptable, the Club is prepared to offer a percentage proportion of the proposed 633 residential units as affordable units (Option 2).*"

7.244 The applicant submitted a viability appraisal which tested the scheme with various levels of affordable housing on site. The appraisal has been assessed by the Council's Valuer using consultants to provide a more detailed analysis. The appraisal has been subject to considerable discussion in conjunction with negotiations over contributions towards transport improvements, and other contributions, and 3rd party interests. The development will also pay CIL for the

[6] A Sporting Future for the Playing Fields of England –Policy on Planning Applications for Development on Playing Fields.

residential units. The viability appraisal indicates that the building of the Conference Centre and associated commercial facilities will be very costly. Because there are very few similar facilities operating, it has been very difficult to estimate the likely return from the operation of the Conference Centre as there are so many uncertainties associated with a revenue business model, which is why by its nature takes a long term view on profitability, potentially in excess of 10-20 years.

7.245 However, while it is accepted that it is difficult to provide an accurate value of the scheme as a whole when completed, and that there are considerable uncertainties and risks involved, the appraisal and the Council's assessment both conclude that the scheme as a whole will result in a significant 'Day 1' cost.

7.246 Nevertheless, the applicant has accepted the need for the residential part of the scheme to provide an element of affordable housing. As a result of the negotiations, the application has now offered the following options:

Option 1(Off-Site Solution)

Total Commuted Sum: RFC to pay to the Council the sum of £8,600,000 (eight million six hundred thousand pounds) in lieu of providing on-site affordable housing within this scheme. This figure is predicated on the basis that the scheme can afford this amount the sum of £8m in lieu of an equivalent onsite contribution with a further payment of £600,000 instead of a claw-back assessment for the scheme which would be normal practice.

The `buy out` provision is a concession relating to the overall delivery of the development including the convention centre

This sum will be split into 2 payments as follows.

First Phase Payment: RFC to pay the Council the sum of £2,800,000 (two million eight hundred thousand pounds) within 28 days of implementation of the planning permission subsequent to the formal grant of the hybrid planning application by the Council. This sum will be index linked to the RPI from the grant of planning permission. Implementation of the planning permission will constitute the start of the development be it constructing any enabling infrastructure, residential or non-residential development approved by the planning permission

Second Phase Payment : A balancing payment of £5,800,000 (five million eight hundred thousand pounds) will be paid no later than eighteen months from the date of the first payment. This sum will not be index linked from the date of the permission until the date of the First Phase Payment.

Option 2 (On-Site Solution)

RFC will, on practical completion of the designated dwellings and on other agreed terms (to include binding any successor in title), transfer 10.00% of the dwellings, currently some 62 dwellings, with designated car parking, to a Reading Borough Council nominated preferred Registered Provider registered with the Homes & Communities Agency under the Housing Act 1996. These will constitute the affordable units.

RFC to pay to the Council the sum of £540,000 (five hundred and forty thousand pounds) in lieu of providing on-site affordable housing within this scheme. This figure is in lieu of the need to incorporate a claw-back assessment for the scheme which would be normal practice. This sum will be paid within 28 days of implementation of the planning permission subsequent to the formal grant of the

hybrid planning application by the Council. This sum will be index linked to the RPI from the grant of planning permission. Implementation will constitute the start of the development be it constructing any enabling infrastructure, residential or non-residential development approved by the planning permission.

7.247 The proposed tenure is:

- Not more than 70% shall be social or affordable rent with the affordable rent capped at 80% of market rent or LHA, whichever is the lower;
- Not more than 30% shall be intermediate rent, or low cost home ownership.

7.248 The proposed mix is:

- 35% will be a 1 bedroom units;
- 55% will be a 2 bedroom units;
- 10% will be a 3/4 bedroom units;

7.249 The 1 and 2 bedroom units will be let at Affordable Rent (capped at 80% market rents or LHA rates, whichever is lower). Any 3 or 4 bedroom units will be let at social rents. The affordable dwellings will on completion be disposed to the nominated practical Registered Provider free of all financial charges and rights of pre-emption or any other liability and free of any capital public subsidy on payment terms to be agreed between RFC and the Registered Provider. It is for the Council to establish any occupier nominations agreement with the Registered Provider. Details of the specification of the affordable dwellings remain to be agreed but will be to a specification approved by the reserved matters planning permission, be no less than the specification adopted for the private units and taking into account all national and local policy and building standards.

7.250 The precise location and phasing of the affordable dwellings within the development will be agreed at the reserved matters planning permission stage subject to the following:

1. The affordable dwellings will not be located within Block 7;
2. The affordable dwellings will be transferred to the Registered Provider on a phased basis over the anticipated 5 year build programme.
3. Under the current phasing programme, the applicant is proposing to locate the affordable dwellings within Blocks 3 and 5 which, according to the latest phasing plan, will be delivered during Q1 2021 through to Q4 2021.

7.251 In financial terms, the applicants believe that Option 1 represents better value to the council and that it is a generous financial settlement in lieu of providing the housing on-site as set out under Option 2. Officers do not disagree with that assertion. Nevertheless, the Council has considerable problems in finding land and other funding to enable off-site provision. While the financial offer is attractive in comparison with the off-site provision, on-site provision is preferred as it offers more certain delivery of affordable housing in the Borough in the short to medium term.

7.252 Officers believe that this is the best that can be achieved in terms of affordable housing based on current viability information. It is not policy compliant provision but the considerable uncertainties involved in providing a conference centre and the conclusions reached on overall viability point to this being a reasonable offer.

7.253 It is expected that any on-site provision will be made in accordance with the requirements set out in the Council's Affordable Housing Supplementary Planning Document. This governs matters such as standards of provision under which any

housing will be expected to meet the Homes and Communities Agency (HCA) Design and Housing Quality Indicators (HQI) as well as the Council's planning requirements.

(xi) Infrastructure Provision (Section 106 and Community Infrastructure Levy)

7.254 Policies CS9 and DM3 allow for securing the necessary contributions to ensure that the impacts of a scheme are properly mitigated for. These are considered to meet the relevant legal tests as set out in the CIL regulations and would mitigate the effects of the scheme effectively. The recommended heads of terms, in addition to affordable housing, are as follows, as also set out in the recommendation above.

Phasing - *To ensure that the convention centre facilities are provided and not solely the housing element.*

- Details of delivery of certain elements of the overall scheme at defined points in time.

Transport: *These measures relate to the site specific requirements of the major commercial facilities which will not otherwise be provided and to ensure that traffic and other impacts of these major attractors are properly managed.*

- Bus priority measures - £1.12million.
- Car Club spaces as approved to be retained.
- Contribution towards Green Wave Bus.
- Free Match day travel details.
- Provision of bus lanes at the exit points to the site and enforcement measures (cameras).
- 100 P&R spaces to be retained.
- Events Management Plan.

Transport obligations from existing Stadium Expansion Section 106: *These are carried forward from that permission*

- RFC Matchday/ Event Travel Plan
- £350,000 to site related transport measures
- RFC Traffic Management contribution £100,000 to mitigate against any overspill parking that occurs as a result of the stadium expansion
- Car Sharing Scheme

Affordable Housing

- On- site 10% **or**
- Off-site financial contribution of £8.6 million

Employment Skills and Training

- Financial contribution to or preparation of Construction skills ESP
- Financial contribution to or preparation of End User ESP

Management re land gas remediation measure - *to ensure that the risks are appropriately reduced and managed.*

- Management of areas to ensure continued integrity of land gas remediation/safety measures including alarms. Management company would need to demonstrate knowledge, experience and resources over the life of the development to manage and maintain safety at all times.
- Annual fee for assessment of monitoring and consequent actions – TBA

Leisure/Open Space/Public Realm - *Local planning policies along with the Council's Open Spaces Strategy are clear that large scale developments such as this*

should provide mitigation measure in line with its impacts on demands for its infrastructure and public open spaces.

- Strategy for the management of the Royal Elm Gardens and Royal Elm Square to be agreed prior to first occupation. The open space to be managed in accordance with the agreement.
- £1.085 million – new play area and artificial turf pitch
- Ice Rink space to be available for use in certain parts of the year. Flexibility to cater for demands of other sports.
- Provision of suitable indoor training facility [Forest School] to be approved, linked to phasing.

Community Use

- The provision of D2 within part of the area identified as office space, which could include a health centre – commitment to explore options with South Reading Clinical Commissioning Group.

Serviced Apartments

- Control of use – limiting stay to no more than 3 months.

Sustainable Urban Drainage Systems

- Whole-life maintenance and management plan for the surface water drainage system.

7.255 The development would involve the creation of additional C3 residential floorspace, which would be liable for Community Infrastructure Levy (CIL) at the rate of £120per sqm. CIL does not form part of the determination of the application, but informatives are included regarding the CIL process following determination.

(xii) <u>Equality</u>

7.256 In determining this application the Council is required to have regard to its obligations under the Equality Act 2010. The key equalities protected characteristics include age, disability, gender, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion or belief, sexual orientation. There is no indication or evidence (including from consultation on the current application) that the protected groups have or will have different needs, experiences, issues and priorities in relation to this particular planning application.

7.257 In terms of the key equalities protected characteristics it is considered there would be no significant adverse impacts as a result of the development. Appropriate consideration has been given to those with disabilities using the proposed facilities.

8. CONCLUSION

8.1 This is a complex land fill site with a number of significant constraints and associated risks for development. The ES has identified a range of mitigation measures and this will be supplemented by planning conditions and a package of Section 106 obligations covering both financial and non-financial matters.

8.2 The site would offer significant economic benefits both during construction and in the operational phases of development and would contribute to reducing local deprivation in terms of skills development, job opportunities and social benefits such as health provision.

8.3 It is the view of officers that, technically, the site can be developed safely subject to stringent conditions and S106 obligations as recommended and discussed. While the proposals are not fully compliant with all relevant policies, and there will be some impacts, the officer view is that the significant economic and other benefits of the scheme as a whole outweigh those concerns. The application is therefore recommended for approval as set out in the Recommendation on the first page of this report.

Case Officer: Alison Amoah

APPENDIX 1 – ILLUSTRATIVE IMAGES - further to follow in update report

View from Stadium along Proposed Royal Elm Gardens

Convention Centre and Royal Elm Square

Block 7

Figure 181. North West Elevation

Figure 182. North East Elevation

Figure 183. South West Elevation

Multi-Storey Car Park

APPENDIX 2 – SUBMITTED DOCUMENTS

A)– Environmental Statement

Chapters, Figures and Appendices saved individually – publically viewable

Environmental Statement Non-Technical Summary

Chapter 1 – Introduction

- *Figure 1.1 – Hybrid Application Boundary Plan*

No Appendices

Chapter 2 – Environmental Impact Assessment Methodology

- *Figure 2.1 – Cumulative Schemes Plan*

Appendices **-**

- Appendix 2.1 – EIA Scoping Report
- Appendix 2.2 – EIA Scoping Opinion
- Appendix 2.2 – Confidential EIA Scoping Response (not publically viewable)
- Appendix 2.3 - Historic Environment Desk Based Assessment

Chapter 3 – Site and Development Description

- *Figure 3.1 – Land Use Hybrid Parameters Plan*
- *Figure 3.2 – Movement Hybrid Parameters Plan*
- *Figure 3.3 – Building Heights Hybrid Parameters Plan*
- *Figure 3.4 – Ground Levels Hybrid Parameters Plan*
- *Figure 3.5 – Proposed Finished Floor Levels Hybrid Parameters Plan*
- *Figure 3.6 – Illustrative Landscape Masterplan*
- *Figures 3.7-3.12 – Detailed Landscape Layout*

Appendices **-**

- Appendix 3.1 – Detailed Plans (listed below)
- Appendix 3.2 – Exterior Lighting Planning Document
- Appendix 3.3 – Energy Strategy
- Appendix 3.4 – Sustainability Statement

Chapter 4 – Alternatives and Design Evolution

- *Figure 4.1 Initial Masterplan Sketch, September 2014*
- *Figure 4.2 -*
- *Figure 4.3 -*
- *Figure 4.4 -*

No Appendices

Chapter 5 – Construction Methodology and Phasing *(prepared by Barton Willmore)*

- *No Figures and no Appendices*

Chapter 6 – Socio-Economics *(prepared by Barton Willmore)*

- *Figure 6.1 – Study Area Plan GIS01*
- *Figure 6.2 – Education Provision Plan GIS02*
- *Figure 6.3 – Healthcare Provision Plan GIS03*

No Appendices

Chapter 7 – Townscape & Views *(prepared by Barton Willmore)*

- *Figure 7.1 – Site Context Plan L1*
- *Figure 7.2 – Site Appraisal Plan L3 Rev A*
- *Figure 7.3 – Topographical Features Plan L2 Rev A*
- *Figure 7.4a – 50k Visual Appraisal Plan L4*
- *Figure 7.4b – 12.5k Visual Appraisal Plan L5*
- *Figure 7.4 c – Location of Site Context Photographs L9*
- *Figure 7.5 – Land Uses and Character Areas Surrounding the Site L8*

- *Figure 7.6 – Light Sources Plan L11*

Appendices **-**

- Appendix 7.1 – TVIA Methodology
- Appendix 7.2 – Site Appraisal Photographs
- Appendix 7.3 – Site Context Photographs
- Appendix 7.4 – Landscape Character Assessment
- Appendix 7.5 – Townscape Effects
- Appendix 7.6 – Visual Effects
- Appendix 7.7 - Verified Photomontages and Supporting Methodology
- Appendix 7.8 - Verified Photomontages and Supporting Methodology (Green Pk)
- Appendix 7.9 – Illustrative Landscape Masterplan
- Appendix 7.10 – Cumulative Townscape Effects
- Appendix 7.11 – Cumulative Visual Effects
- Appendix 7.12 – Aboricultural Survey and Arboricultural Impact Assessment Thomson Ecology

Chapter 8 – Ecology and Nature Conservation *(prepared by Aspect Ecology)*

- *Figure 8.1 – Ecological Designations*
- *Figure 8.2 -*
- *Figure 8.3 -*
- *Figure 8.4 -*
- *Figure 8.5 -*

Appendices **-**

- Appendix 8.1 – Ecological Baseline Assessment
- Appendix 8.2 – Scoping Responses
- Appendix 8.3 – Bat Boxes

Chapter 9 – Water Environment *(prepared by Arup)*

- *Figure 9.1 – Surface Water Key Features*
- *Figure 9.2 – Fluvial Flood Risk Map*

Appendices **-**

- Appendix 9.1 – Flood Risk Assessment
- Appendix 9.2 – Environment Agency Flood Risk Mapping
- Appendix 9.3 – Environment Agency Data
- Appendix 9.4 – Thames Water Assets

Chapter 10 – Land Contamination *(prepared by Arup)*

- *Figure 10.1 - Area of Recorded Landfill and Worked Areas*
- *Figure 10.2 – Geological Map*
- *Figure 10.3 – Geological Map Legend*
- *Figure 10.4 – Area of Permitted Landfill*
- *Figure 10.5 – Location of Cross-Sections*
- *Figure 10.6 – Earthworks Cross- Sections*
- *Figure 10.7 – Monitoring Locations*

Appendices **-**

- Appendix 10.1 – Enviro Check Report
- Appendix 10.2 – Reading Borough Council Meeting Notes
- Appendix 10.3 – Historical Summary
- Appendix 10.4 – Remedial Works
- Appendix 10.5 – Environmental Monitoring

Chapter 11 – Transport and Access *(prepared by Peter Brett Associates)*

- *No Figures or Appendices*

Chapter 12 – Air Quality *(prepared by Air Quality Consultants)*

- *Figure 12.1 – Locations of Proposed Receptors*
- *Figure 12.2 – Locations of Nearby Existing Receptors*

- *Figure 12.3 – Locations of Proposed Receptors*
- *Figure 12.4 – Locations of Town Centre Automatic Monitoring Sites*
- *Figure 12.5 – Location of Nearby Diffusion Tube Monitoring Sites*
- *Figure 12.6 – Distance Bands Around Roads used by Construction Traffic*

Appendices **-**

- Appendix 12.1 – Construction Dust Assessment
- Appendix 12.2 – EPUK & IAQM Planning for Air Quality Guidance
- Appendix 12.3 – Professional Experience
- Appendix 12.4 – Consultation
- Appendix 12.5 – Modelling Methodology
- Appendix 12.6 – Energy Plant Specifications
- Appendix 12.7 – Impacts of the Emergency Generators
- Appendix 12.8 – Construction Mitigation

Chapter 13 – Noise and Vibration *(prepared by Sharps Redmore)*

- *No Figures*

Appendices **-**

- Appendix 13.1 – Survey Details and Results
- Appendix 13.2 – Predicted Noise Levels
- Appendix 13.3 – Construction Calculations

Chapter 14 – Daylight, Sunlight & Overshadowing *(prepared by Malcolm Hollis)*

- *No Figures*

Appendices **-**

- Appendix 14.1 – Context Drawings
- Appendix 14.2 – Average Daylight Factor Analysis
- Appendix 14.3 – Daylight Distribution Study
- Appendix 14.4 – Vertical Sky Component Analysis
- Appendix 14.5 – Annual Probable Sunlight Hours Analysis – Detailed Block
- Appendix 14.6 – Annual Probable Sunlight Hours Analysis – Outline Element of the Development
- Appendix 14.7 – Overshadowing Study

Chapter 15 – Wind Microclimate *(prepared by Arup)*

- *Figure 15.1 – Annual Wind Rose from Farnborough 10m Height*
- *Figure 15.2 – View of Existing Site Showing Key Areas of Windiness*
- *Figure 15.3 – Top View of Residential Development with Areas of Windiness*
- *Figure 15.4 – Top View of Car Parking Showing Key Wind Mechanisms*
- *Figure 15.5 – View of Car Park and Madejski Millennium Hotel Passage from North*
- *Figure 15.6 – Southern View of Convention Centre*
- *Figure 15.7 – View of Convention Centre from the North*
- *Figure 15.8 – View of the Convention Centre from the South*

No Appendices

Chapter 16 – Summary And Residual Effects

- *No Figures or Appendices*

B) – Technical Documents (some form appendices to the ES as referred to above) – dated January 2016, unless otherwise indicated

- Arboricultural Survey, prepared by Thomson Ecology (dated March 2015)
- Aboricultural Impact Assessment, prepared by Thomson Ecology
- Counter Terrorism Planning Guidance, prepared by BGS Ltd (dated September 2016), received 19th September 2016
- Design and Access Statement, prepared by Barton Willmore
- Development Overview, prepared by Barton Willmore

- Drainage Design Report, prepared by Arup Issue 1, dated 11th January 2016, received 20th April 2016
- Economic Benefits Statement, prepared by Barton Willmore
- Energy Strategy, prepared by Hoare Lea Rev 01
- Environmental Strategy, prepared by Arup Rev A, dated 27th June 2016, received 6th July 2016
- Exterior Lighting Strategy, prepared by Hoare Lea
- Flood Risk Assessment
- Geo-Environmental Interpretive Report Issue 01, dated and received 20th October 2016
- Ground Investigation Specification Rev A, prepared by Arup, received 11th May 2016
- Historic Environment Desk Based Assessment, prepared by ADAS UK Ltd
- Planning Statement, prepared by Barton Willmore
- Sequential and Impact Assessment, prepared by Barton Willmore
- Statement of Community Engagement, prepared by The Communication Group Plc
- Superfast Broadband Strategy Rev 01, prepared by Hoare Lea
- Sustainability Strategy, prepared by Hoare Lea
- Utility Infrastructure Servicing Strategy, prepared by Hoare Lea
- Viability Assessment (confidential) prepared by Steve Smith, Haslams

C) - Technical Notes, Relevant Correspondence, File Notes and Updates

- Arup - Response to Environmental Protection concerns – Landfill Gas, dated 12th April 2016, received 20th April 2016
- Arup - Thames Water Planning Consultation Response, dated 15th April 2016, received 20th April 2016
- Arup- Land Contamination, dated 22nd June 2016, received 29th June 2016
- PBA - Response to Reading Borough Council to queries and comments made in respect of submitted Transport Assessment for Royal Elm Park, dated 20th May 2016, received 25th May 2016
- PBA - Addendum to 32605 TN_028, dated 22nd June 2016, received 28th June 2016
- PBA - Considerations for changes to the number of dwellings – Transport and Access TN03, dated June 2016, received 28th June 2016
- Arup - Environmental Wind: Response to BRE Review of Wind Microclimate Study of 28th April 2016, received 29th June 2016
- Aspect Ecology's Ecology Technical Note, TN1 - Assessment of Shading Effects from the Development on Foudry Brook, dated 22 June 2016
- Updated Land Use Schedule, received 29th June 2016
- Barton Willmore Response Letter to Deloitte, dated 3rd December 2015, received 29th June 2016
- Barton Willmore Response Letter to Deloitte, dated 11th April 2016, received 29th June 2016
- Barton Willmore Letter - Matters Relating to EIA, dated and received 29th June 2016
- PBA - Response to Reading Borough Council to queries and comments made in respect of submitted Transport Assessment for Royal Elm Park, TN_028, dated 20th May 2016, received 29th June 2016
- Landscape and Visual Effects: Statement With Regard to Amended Scheme, prepared by Barton Willmore, received 29th June 2016
- Barton Willmore Response Letter to Sport England Comments dated 3rd March 2016, letter dated 29th June 2016, received 29th June 2016
- Arup response - Thames Water Planning Consultation Response of 15th April 2016, received 29th June 2016
- PBA – Technical Note TN_029 Conference Centre Scenarios and Travel Management, dated June 2016, received 7th July 2016

- PBA – Technical Note 032 West Berkshire Council Comments 17/3/16, received 30th June 2016
- PBA – Technical Note 033 Royal Elm Park Phasing Programme, dated July 2016, received 5th July 2016
- Aspect Ecology – Ecology Technical Note – TN1- Assessment of Shading Effects for the Development on Foudry Brook, dated 22nd June 2016, received 29th June 2016
- Barton Willmore – Covering Letter regarding EIA 2nd response, dated and received 6th July 2016
- PBA – Technical Note 031 – Response to Wokingham Borough Consultation letter of 13/6/16, received 12th July 2016
- PBA – Technical Note _034 – Response to comments attached to Wokingham Borough Council (WBC) Letter Dated 20th July 2016 - WBC comments 17th November 2016, received 17th November 2016
- PBA – Technical Note 32605_TN_036 Response to RBC Letter Dated 26th August 2016, received 14th September 2016
- PBA – Technical Note TN_037 Over Capacity Queues and Journey Times, received 21st September 2016
- Transport Briefing Note for Members, received 21st September 2016
- Arup – Position Statement of Ground Conditions, received 21st September 2016
- Arup – Response to updated BRE Review of Wind Microclimate Study dated 8th September 2016, received 29th September 2016
- PBA – Technical Note 32605_TN_041 Comparison of Proposed Royal Elm Public Transport Provision and Consented 2007 Expansion Proposal, dated 24th October 2016, received 3rd November 2016
- PBA – Technical Note 32605_TN_042 Response to RBC dated 20th October 2016, dated November 2016, received 3rd November 2016
- Arup – Site Characterisation Update Report, dated 17th February 2017
- Arup – Site Characterisation Update Report, dated 31st March 2017, received 3rd April 2017

D) - Plans

Existing

- Sections Through Site – Drawing no: 102
- Proposed Sections (approved Academy Training Facilities) – Drawing no: 202
- Academy Training Facility – Drawing no: 3782/AT01
- Academy Training Facility – Site Plan (as proposed) – Drawing no: 3782 PL202
- Academy Training Facility – Proposed Building Plans – Drawing no: 3782 PL203
- Academy Training Facility – Proposed Elevations – Drawing no: 3782 PL204
- East Stand Section [Stadium]
- Stadium Expansion Fire Strategy Phase 2 Ground Floor Plan – Drawing no: TI 3700 Rev A
- Stadium Expansion Fire Strategy Phase 2 Level 1 Plan – Drawing no: TI 3701
- Stadium Expansion Fire Strategy Phase 2 Level 2 Plan – Drawing no: TI 3702 Rev A
- Stadium Expansion Fire Strategy Phase 2 Level 3 Plan – Drawing no: TI 3703 Rev A
- Stadium Expansion Fire Strategy Phase 2 Level 4 Plan – Drawing no: TI 3704 Rev A
- Stadium Expansion Ground Floor Fit Out Zones – Drawing no: 1051
- Stadium Expansion Level 1 Fit Out Zones – Drawing no: 1051
- Stadium Expansion Level 2 Fit Out Zones – Drawing no: 1052
- Stadium Expansion Level 3 Fit Out Zones – Drawing no: 1053
- Stadium Expansion Level 4 Fit Out Zones – Drawing no: 1054
- Stadium Expansion Capacity Fit Out Zones – Drawing no: 1055
- Stadium Expansion Ground Floor Plan – Drawing no: 510
- Stadium Expansion Ground Level Concourse General Arrangement Plan- Drawing no: 502 Rev AE
- Stadium Expansion Level 1 Plan – Drawing no: 511

- Stadium Expansion Level 2 Plan – Drawing no: 512
- Stadium Expansion Level 3 Plan – Drawing no: 513
- Stadium Expansion Seating Bowl – Drawing no: 515
- Stadium Expansion Sections – Drawing no: 516
- Stadium Expansion Location Plan
- Stadium Expansion Upper Tier Sketch Proposals - Drawing no: 35000seating
- Stadium Expansion Proposed Level 3 Concourse Extracts for Ground Level - Drawing no: 35000concourse
- Stadium Expansion Proposed Elevation Phase 2 – Drawing no: 561B
- Stadium Expansion Proposed Elevation Phase 1 – Drawing no: 550B
- Feasibility Scheme for 35000 Capacity Stadium [Elevations] – Drawing no: 35000elevation
- Topographical Survey (Feb 2015) – Drawing nos: 4213/R5/1-R5/15

Proposed

- Site Location Plan - Drawing no: RG –M-48 Rev A
- Illustrative Landscape Masterplan - Drawing no: RG – PS05 Rev C

Hybrid
- Hybrid Masterplan RG-M-A147B
- Hybrid Parameter Plan Land Use – Drawing no: RG-M-26 Rev D
- Hybrid Parameter Plan Movement – Drawing no: RG-M-27 Rev B
- Hybrid Parameter Plan Building Heights - Drawing no: RG-M-28 Rev E (
- Hybrid Parameter Plan Ground Levels - Drawing no: RG-M-29 Rev B
- Hybrid Parameter Plan Proposed Finished Floor Levels - Drawing no: RG-M-30 Rev C
- Hybrid Application Boundaries Plan – Drawing no: RG-M-33 Rev C
- Phasing Plan – Drawing no: RG-M-AI55

Convention Centre
- Ground Floor Plan – Drawing no: 100 Rev 01
- Level 1A Floor Plan – Drawing no: 100A Rev 01
- Level 2 Floor Plan – Drawing no: 102 Rev 01
- Level 3 Floor Plan – Drawing no: 103 Rev 01
- Level 4 Floor Plan – Drawing no: 104 Rev 01
- Level 5 Floor Plan – Drawing no: 105 Rev 01
- Level 6 Floor Plan – Drawing no: 106 Rev 01
- Level 7 Floor Plan – Drawing no: 107 Rev 01
- Level 8 Floor Plan – Drawing no: 108 Rev 01
- Level 9 Roof Plan – Drawing no: 109 Rev 01
- Overall 4 elevations 200
- North East and North-West Elevation– Drawing no: 200.01 Rev 02
- South West Elevation and South East Elevation – Drawing no: 200.02 Rev 02
- Courtyard Elevation Facing Pool, Courtyard Elevation Facing Hotel and Facing Apartments – Drawing no: 200-03 Rev 02
- North East Elevation – Part Elevation 1/2 – Drawing no: 201.01 Rev 01
- North East Elevation – Part Elevation 2/2 – Drawing no: 201.02 Rev 01
- North West Elevation – Part Elevation 1/2 – Drawing no: 202.01 Rev 01
- North West Elevation – Part Elevation 2/2 – Drawing no: 202.02 Rev 01
- South East Elevation – Part Elevation 1/2 – Drawing no: 203.01 Rev 01
- South East Elevation – Part Elevation 2/2 – Drawing no: 203.02 Rev 01
- South West Elevation – Part Elevation 1/2 – Drawing no: 204.01 Rev 01
- South West Elevation – Part Elevation 2/2 – Drawing no: 204.02 Rev 01
- Courtyard Elevation Facing Hotel – Part Elevation – Drawing no: 205 Rev 01

- Courtyard Elevation Facing Serviced Apartments – Part Elevation – Drawing no: 206 Rev 01
- Courtyard Elevation Facing Pool – Part Elevation – Drawing no: 207 Rev 01
- Level 1 Floor Plan – Link Bridge Elevations and Section - Drawing no: 301
- Detailed Serviced Apartment layout Level 1-6 – Drawing no: 401 Rev 01

Block 7

- Block 7 Basement Plan – Drawing no: PL-70 Rev F
- Block 7 Ground Floor Plan – Drawing no: PL-71 Rev F
- Block 7 First Floor Plan – Drawing no: PL-72 Rev F
- Block 7 Second Floor Plan – Drawing no: PL-73 Rev D
- Block 7 Third Floor Plan – Drawing no: PL-74 Rev C
- Block 7 Fourth Floor Plan – Drawing no: PL-74i Rev C
- Block 7 Fifth Floor Plan – Drawing no: PL-75 Rev D
- Block 7 Sixth Floor Plan – Drawing no: PL-75i Rev C
- Block 7 Seventh Floor Plan – Drawing no: PL-76 Rev F
- Block 7 Roof Plan – Drawing no: PL-79 Rev B
- Elevation 01 – Drawing no: EL-001
- Elevation 02 – Drawing no: EL-002
- Elevation 03 – Drawing no: EL-003
- Elevation 04 – Drawing no: EL-004
- Elevation 05 – Drawing no: EL-005
- Elevation 06 – Drawing no: EL-006
- Elevation 07 – Drawing no: EL-007
- Elevation 08 – Drawing no: EL-008

Blocks 1-7

- Blocks 1-6 Basement Plan – Drawing no: ALO50 Rev F
- Blocks 1-6 Ground Floor Plan – Drawing no: ALO51 Rev F
- Blocks 1-6 1st Floor Plan – Drawing no: ALO52 Rev F
- Blocks 1-6 2nd Floor Plan – Drawing no: ALO53 Rev E
- Blocks 1-6 3rd Floor Plan – Drawing no: ALO54 Rev E
- Blocks 1-6 4th Floor Plan - Drawing no: ALO55 Rev E
- Blocks 1-6 5th Floor Plan – Drawing no: ALO56 Rev E
- Blocks 1-6 6th Floor Plan – Drawing no: ALO57 Rev D
- Blocks 1-6 7th Floor Plan – Drawing no: ALO58 Rev D
- Blocks 1-6 Roof Plan – Drawing no: ALO62 Rev C
- SBD Blocks 01-07 Car Parking Layout – Drawing no: ALO-60
- Illustrative Elevation Blocks 1-7 - Drawing no: PL-EL-001 Rev B
- Illustrative North, South and West Elevations of Blocks 1-7 - Drawing no: PL-EL-002

Multi-Storey Car Park

- Car Park Plans Sheet 1 – Drawing no: RG-A-04
- Car Park Plans Sheet 2 – Drawing no: RG-A-05
- Elevations– Drawing no: RG-A-06
- Car Park Sections - Drawing no: RG-A-09
- Roof Plan - Drawing no: RG-A-13

Landscape

- Detailed Landscape Layout Hard and Soft 1 of 6 – Drawing no: RG-L06-1
- Detailed Landscape Layout Hard and Soft 2 of 6 – Drawing no: RG-L06-2
- Detailed Landscape Layout Hard and Soft 3 of 6 – Drawing no: RG-L06-3
- Detailed Landscape Layout Hard and Soft 4 of 6 – Drawing no: RG-L06-4
- Detailed Landscape Layout Hard and Soft 5 of 6 – Drawing no: RG-L06-5

- Detailed Landscape Layout Hard and Soft 6 of 6 – Drawing no: RG-L06-6
- Royal Elm Gardens – Terrace Detailed Plan and Section – Drawing no: RG-L07-1
- Royal Elm Square Detailed Plans and Section – RG-L07-2

Other Plans

- Car Club Parking Locations – Drawing no: 32605-0301, received 28th June 2016
- Fire Access Assessment Access to Block 7 Stair/ Fire Fighting Cores – Drawing no: 32605-015 Rev D, received 28th June 2016
- Fire Appliance Swept Path Analysis - Drawing no: 32605-007 Rev D, received 28th June 2016
- Fire Appliance Swept Path Analysis - Drawing no: 32605-008 Rev D, received 28th June 2016
- RBC Refuse Swept Path Analysis - Drawing no: 32605-005 Rev D, received 28th June 2016
- Revised Vehicle Priority - Drawing no: 32605-025 Rev A, received 28th June 2016
- Bus Intervisibility on Internal Link Roads - Drawing no: 32605-024 Rev B, received 28th June 2016
- Possible Clockwise Bus Hub Circulation - Drawing no: 32605-027 Rev A, received 28th June 2016
- Cycle Parking Locations - Drawing no: 32605-029, received 28th June 2016
- Block 7 Cycle Parking - Drawing no: 32605-028, received 28th June 2016
- Tree Pit root Cell Calculation – Drawing no: RG-L-12, received 29th June 2016
- Phasing Diagram and Public Transport Provision – Drawing no: 32605/031, received 5th July 2016
- Football Transport Management Plan, received 7th July 2016
- Ecological Mitigation and Enhancement Plan – Drawing no: 4083/EMEP1, received 12th August 2016
- Appendix 3 [of Geo-Environmental Interpretive Report] – Borehole Locations Fig 04 Issue 01, received 15th September 2016
- Event Management Plans, Rev A, prepared by PBA, received 5th April 2017
- Security Strategy – Drawing no: A143 Rev A, received 11th October 2016
- Non Match Bus Lane on Biscuit Way for Conference Event Traffic Management – Drawing no: 32605-41, received 3rd November 2016
- Possible Traffic Signal Controlled Exit with Bus Lane Approach Priority South Oak Way (Hurst Way) – Drawing no: 32605/42, received 28th November 2016

Amended Received 29th June 2016

- Block 7 Basement Plan – Drawing no: PL-70 Rev G
- Block 7 Ground Floor Plan – Drawing no: PL-71 Rev G
- Block 7 First Floor Plan – Drawing no: PL-72 Rev G
- Block 7 Second Floor Plan – Drawing no: PL-73 Rev D
- Block 7 Third Floor Plan – Drawing no: PL-74 Rev C
- Block 7 Fourth Floor Plan – Drawing no: PL-74i Rev C
- Block 7 Fifth Floor Plan – Drawing no: PL-75 Rev D
- Block 7 Sixth Floor Plan – Drawing no: PL-75i Rev C
- Block 7 Seventh Floor Plan – Drawing no: PL-76 Rev G
- Block 7 Roof Plan – Drawing no: PL-79 Rev C
- Illustrative Landscape Masterplan- Drawing no: L-PS05 Rev E
- Detailed Landscape Layout Hard and Soft 1 of 6 – Drawing no: RG-L06-1 Rev B
- Detailed Landscape Layout Hard and Soft 2 of 6 – Drawing no: RG-L06-2 Rev B
- Detailed Landscape Layout Hard and Soft 3 of 6 – Drawing no: RG-L06-3 Rev B
- Detailed Landscape Layout Hard and Soft 4 of 6 – Drawing no: RG-L06-4 Rev B
- Detailed Landscape Layout Hard and Soft 5 of 6 – Drawing no: RG-L06-5 Rev B
- Detailed Landscape Layout Hard and Soft 6 of 6 – Drawing no: RG-L06-6 Rev B

- Elevation 01 – Drawing no: EL-001 Rev A
- Elevation 02 – Drawing no: EL-002 Rev A
- Elevation 03 – Drawing no: EL-003 Rev A
- Elevation 04 – Drawing no: EL-004 Rev A
- Elevation 05 – Drawing no: EL-005 Rev A
- Elevation 06 – Drawing no: EL-006 Rev A
- Elevation 07 – Drawing no: EL-007 Rev A
- Elevation 08 – Drawing no: EL-008 Rev A
- Blocks 1-6 Basement Plan – Drawing no: ALO50 Rev H
- Blocks 1-6 Ground Floor Plan – Drawing no: ALO51 Rev H
- Blocks 1-6 1st Floor Plan – Drawing no: ALO52 Rev H
- Blocks 1-6 2nd Floor Plan – Drawing no: ALO53 Rev G
- Blocks 1-6 3rd Floor Plan – Drawing no: ALO54 Rev H
- Blocks 1-6 4th Floor Plan - Drawing no: ALO55 Rev G
- Blocks 1-6 5th Floor Plan – Drawing no: ALO56 Rev G
- Blocks 1-6 6th Floor Plan – Drawing no: ALO57 Rev F
- Blocks 1-6 7th Floor Plan – Drawing no: ALO58 Rev F
- Blocks 1-6 Roof Plan – Drawing no: ALO62 Rev D
- Site Wide Plan [Landscaping] – Drawing no: RG-L06A-7
- The Forest School Location Plan – Drawing no: RG-L14, received 29th June 2016
- Design and Access Statement Addendum, prepared by Barton Willmore, received 29th June 2016
- Amended ES – Chapter 14- Daylight, Sunlight and Overshadowing, received 6th July 2016
- Appendix 14.1a – Context Drawings, received 6th July 2016
- Appendix 14.2A – Average Daylight Factor Analysis, received 6th July 2016
- Appendix 14.3A – Daylight Distribution Study, received 6th July 2016
- Appendix 14.4A – Vertical Sky Component Analysis, received 6th July 2016
- Appendix 14.5A – Annual Probable Sunlight Hours Analysis – Detailed Block, received 6th July 2016
- Appendix 14.6A – Annual Probable Sunlight Hours Analysis – Outline Element of the Development, received 6th July 2016
- Appendix 14.7A – Overshadowing Study, received 6th July 2016
- Phasing Plan – Drawing no: RG-M-AI55 Rev A

Amended Plans received 12th August 2016

- Detailed Landscape Layout Hard and Soft 1 of 6 – Drawing no: RG-L06-1 Rev C
- Detailed Landscape Layout Hard and Soft 2 of 6 – Drawing no: RG-L06-2 Rev C
- Detailed Landscape Layout Hard and Soft 3 of 6 – Drawing no: RG-L06-3 Rev C
- Detailed Landscape Layout Hard and Soft 4 of 6 – Drawing no: RG-L06-4 Rev C
- Detailed Landscape Layout Hard and Soft 5 of 6 – Drawing no: RG-L06-5 Rev C
- Detailed Landscape Layout Hard and Soft 6 of 6 – Drawing no: RG-L06-6 Rev C

APPENDIX 3 – FULL CONSULTATION RESPONSES

1) RBC Transport

(Initial response 21/4/16. Three further responses provided, but not included here)

It should be stated that the planning permission to expand the capacity of the adjacent football stadium to 36,900 has been implemented and therefore the requirements of that permission have also been taken into account when assessing this proposal.

Given the nature of the development a Transport Assessment has been submitted to accompany the planning application and my following comments on it are as follows:

Public Transport Provision

The development results in a loss of 883 car parking spaces on the site including a reduction of Park and Ride spaces from 600 to 100. This reduction in Park and Ride spaces has previously been agreed but for match days only, with the 600 spaces retained to meet weekday demand. The permanent reduction to 100 spaces is proposed following the opening of Mereoak Park and Ride, this has been discussed with the Transport Planning Manager and has been agreed subject to the Park and Ride bus service still be able to adequately serve the application site.

Existing Green Wave Service

The site is served by Green Wave bus service and following discussions with my Transport Planning colleagues there is concern that the internal link road is inappropriate to accommodate a successful bus service. Although the route would be located directly adjacent to the residential element of the proposals, the design of the internal link road and the fact buses would get no priority over the multi storey car park would have a detrimental impact on the reliability of the service.

As stated at Point 3.7.4 of the Transport Assessment the Green Wave service currently provides up to 5-6 buses an hour to serve the site however given the lack of priority for the service within the proposed layout is likely to result in a reduction in the number of buses serving the site. This in turn will have implications for trip rates which I cover later in this response.

In addition the Green Wave service runs at peak times through the site and there is concern over the operation of this service during the evening peak when a large conference takes place. You may be aware that the Green Wave service does not serve the site during match times given the significant delay that would occur along the route. Clarity is therefore required as to what priority measures would be given to this service to ensure that a dedicated bus provision can serve the site. It is essential that this service is retained to serve the residential and employment on the site that would use this facility on a daily basis, any disruption to this service will act as a deterrent to people using the bus as an alternative to the private vehicle.

Bus stops have been indicated on the proposed internal link road and with a dedicated space on the edge of the bus interchange. However, it is believed that this would be confusing to customers of the Park and Ride and therefore both stops should be located within the interchange, one on the northern side of the carriageway and one within the interchange itself. This will give continuity over where people need to go to get a bus.

To help serve the site by public transport the bus interchange will also need to be able to accommodate a bus turning right (travelling west to east) to access the proposed stops. This is to ensure that existing services continue to serve the site and there is flexibility in any future services. A tracking diagram is therefore required illustrating a bus undertaking this manoeuvre.

Bus stops for the Green Wave service are also already located on Northern Way which provide a service for Reading Gate Retail Park, these bus stops should remain and therefore must be included on the submitted plans.

The applicants have anticipated that the existing Green Wave service could serve the day to day operation of the proposed development i.e. residents, staff, hotel and serviced apartments, as is outlined in paragraphs 3.7.6, 3.7.7 and 9.1.3 of the Transport Assessment. Table 9-1 provided below indicates a relatively low level of bus passengers within the peak periods and no data has been provided to confirm this number of bus passengers.

Table 9-1: AM and PM Peak Hours Day to Day Operation Bus Passenger Trips

Time Period	Bus Passenger Trips		
	Arrive	Depart	Two-Way
08:00-09:00	10	39	49
17:00-18:00	47	19	60

In addition Paragraph 9.1.3 specifically states that '*it is considered likely that these additional bus trips could be accommodated within the current provision. However, bus occupancy surveys will be carried out prior to implementation of the development, and an additional bus will be funded by the developer should the surveys show this to be required.'* Clarification is required on the number of bus passengers to establish whether a survey of the exiting bus patronage is required.

Football Services
A loss of car parking spaces has previously been agreed as part of the approved stadium expansion application on the basis that the football club will undertake the following as stipulated within Paragraph 3.2 of the Transport Statement submitted with the stadium expansion application:

- *Accommodating a significant increase in bus transport and supporting its use through a number of incentive measures that include:*
    - ***Increased bus parking on-site***
    - *Priority access to and from the site*
    - *Subsidized bus travel*
    - *The provision of more bus journeys on existing and new routes*
- *Promoting car sharing; and*
- *Better and more facilities for on-site bicycle and motorbike parking.*

Any loss of car parking on the application site would therefore need to ensure these mitigating measures are adhered to or alternatives provided.

With regards the increased bus parking on-site I would add that paragraph 4.2 of the 2007 Transport Statement states that:

In order to accommodate all the additional buses for a capacity crowd on-site, it is proposed to use Car Parks 1 and 2 for matchday bus parking. ***The car parking spaces in Car Parks 1 and 2 could accommodate approximately 100 buses which would be almost enough to cater for increased services due to the stadium expansion and increase in mode share****. Existing bus stops on Northern Way, Hurst Way and between Car Parks 1 and 2 could store the additional busses*.

The proposed development will result in a significant reduction in the number of bus services that could be stored on site. It is recognized that although the previous application secured an area capable of storing 100 buses that this number of buses may not be required with many of the buses providing shuttle services to the Town Centre and park and ride sites.

The Transport Assessment implies that given the additional facilities being proposed that supporters and conference attendees would arrive earlier and stay later. I am happy to accept that this may be the case with regards some conference events and during the build up to a football match specifically in using coffee shops, bars and restaurants but I do not believe this to be the case at the end of a football match. This is something that has been expressed during my pre-application discussions. From my experience of attending football and other sporting events there may be some supporters who would stay and make use of the adjacent facilities but the vast majority would want to leave as soon as possible therefore it is essential that a sufficient number of bus services are within close proximity of the stadium to facilitate the significant demand.

To ensure that attendees of football matches utilize public transport it is imperative that it is as efficient as possible to ensure fans do not have extensive waiting times to access buses. Any significant delays will not promote the service and will only encourage the use of the private car. As stated above the proposed stadium expansion allowed for the provision of 100 buses to be stored on the site which would have permitted easy egress form the site at the end of a match.

The proposed interchange at the stadium provides for 13 bus stops as well as an lay by for up to 20 buses. Paragraph 13.6.6 states that '*at the end of an event buses will be in place at the bus stops ready to receive passengers. In the case of the local services, 7 buses will be on stands with the remaining 7 services waiting in the stacking area*', however the existing situation at the end of a football match is that 14 local buses are receiving passengers at any one time. The proposals therefore worsen the existing operation for these local services.

The interchange locates the bus storage area on the northern side of Northern Way with these vehicles being called to a specific stop on the southern side of Northern Way when a bus stop becomes available. As stated between paragraphs 2.5.5 and 2.5.8 there are a total of 21 bus routes consisting of shuttle services to Reading Station, Mereoak Park and Ride and Shinfield Park Park and Ride as well as local services and those travelling to the wider area that currently serve the site on match days. Out of these services the current operation accommodates the simultaneous loading of approximately 39 buses excluding the park and ride shuttle services. This is only the existing provision and does not take account of any additional services that need to be provided for should the stadium expansion be fully built out. On reviewing the interchange arrangement

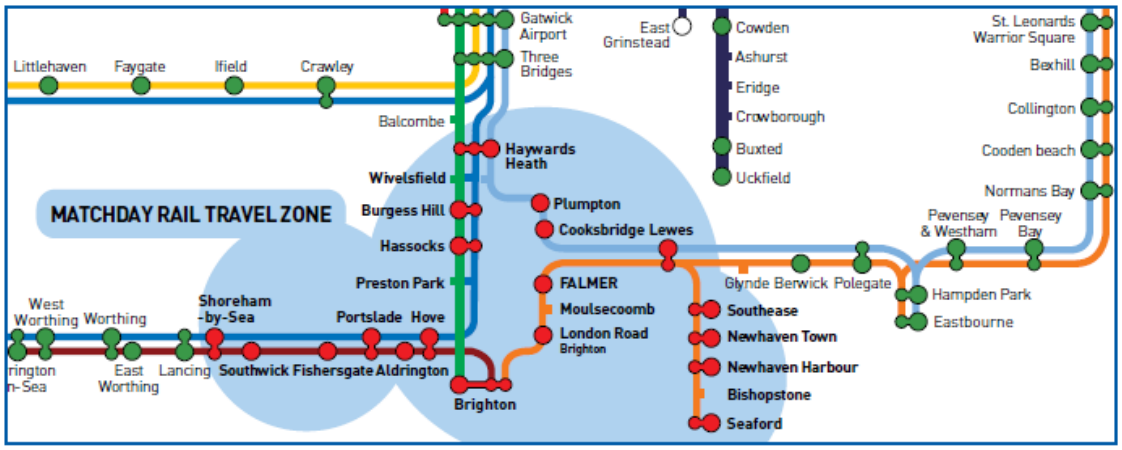
To accommodate the exit of supporters based on the proposed mode share of 61% for a 36,900 capacity stadium and utilising the loading of just 13 buses, it would take approximately 1hr and 45 minutes to clear the surrounding area of supporters. This calculation is based on a conservative estimated loading time of 5 minutes. The existing provision of loading 39 buses at a time would take just 36-40 minutes to clear the surrounding area of supporters. Admittedly this may take slightly longer as this does not account for buses returning from their journeys to the town centre etc. but it is evident that providing for an interchange similar to the existing facility will significantly improve the operation to that proposed.

The proposal is also not in line with the proposals put in place for the stadium expansion permission as detailed above.

It is acknowledged that not all the bus services would load / unload from the interchange but it should be redesigned so that it can accommodate an increased loading capacity that limits waiting times for supporters to promote the use of the bus as an alternative to the private car.

Waiting times for buses will be a crucial part of the decision making of supporters especially those who reside up to 90 minutes travel time from the stadium that you will be trying to encourage to switch travel modes.

Subsidised travel for fans has been proposed, which would be paid for through an extra charge included within a match ticket, however it has not been confirmed what forms of transport this will include. The application refers to the Brighton FC Model which includes free public travel on a wide range of facilities for a significant catchment area, highlighted below:



The Brighton Model therefore provides an extensive public transport option for supporters travelling to the stadium, the proposed offer for fixtures at the Madejski Stadium should therefore be detailed so that it is known what offers will be available for supporters.

With regards the operation of match day buses and in particular within the Town Centre Point 13.6.12 stipulates that:

'Should events require additional bus provision, opportunities exist at the Reading Station northern entrance within the bus facilities there as well as the potential to use a lay-by located on Vastern Road adjacent to the northern interchange. This lay-by is in the order of 90m in length and capable of accommodating up to 6 buses. Access between the Station Hill and the Northern entrance is achieved via a pedestrian tunnel under the station.'

The area stipulated within the northern interchange is currently for taxi's and there is no guarantee that this would ever be available for a commercial use to operate so therefore cannot be relied upon as part of these proposals.

The away supporters coaches are to access the site via South Oak Way as existing and would be accommodated within a layby on the western side of Biscuit Way and therefore in principle is acceptable. However, the route for the vehicles is to also leave the site via South Oak Way with a turning area proposed between the existing Millenium Hotel and the Multi Storey Car Park. The tracking diagram for the buses / coaches demonstrates that these vehicles cannot undertake these manoeuvres without coming into conflict with bollards and therefore the turning area is insufficient. In addition this route will be available to traffic associated with the residential and the multi storey car park at all times as well as general pedestrian movement associated with the proposed and existing adjacent land uses. To avoid conflicting movements within the site the turning for away coaches should be re-designed so that it is incorporated within the overall site layout.

Conference use

Although car parking will be provided for conference visitors the main focus will be to provide suitable public transport provision to accommodate the movement of in excess of 4,000 people. In principle this is acceptable but I do have some queries regarding the operation of these facilities.

The first of which is that Point 13.7.1 regarding conference events states that:

'The majority of those arriving by public transport are likely to arrive at Reading Station or by bus via Mereoak Park and Ride. The focus of additional public transport measures will therefore be shuttle buses between the Town Centre and Royal Elm Park.'

I must stress that the demand for Mereoak Park and Ride is increasing and separate agreements are currently in place to provide dedicated park and ride services to Green Park. The number of spaces that are likely to be available on a weekday would therefore be limited and should not be included within any assumptions for public transport to and from the site.

The second is that to promote a useable, reliable and convenient shuttle service between Reading Station and the site for conferences the shuttle buses would need to be located as close to the station as possible. However no assessment has been undertaken to determine where these services could be located at Reading Station. The station area currently has very little capacity, especially at peak times when the shuttle buses for a conference would be mainly operating. As far as I am aware the applicant currently does not own any land surrounding the station that could accommodate an interchange and therefore an agreement would be required with the Highway Authority / Council or a separate land owner to provide a suitable facility. The land itself must also be included within the red line of the plan as this would be a fundamental element of the proposed development. The use of public transport is a significant part of the proposal and therefore the pick up and drop off of conference attendees at both ends of the journey is essential. As a result detailed proposals need to be provided to establish where and how

this would operate and this would need to be included within the S106 Agreement.

The proposal will require a significant amount of public transport to be travelling along the A33 in between the site and Reading Town Centre, although the movement of people will be counter tidal to the peak flows the buses will need to return to collect additional passengers. These trips will be within the peak traffic flows which have considerable delays at present and as stated later in this report will be worse by year 2021. Table 9-2 of the Transport Assessment, detailed below states that based on a maximum capacity of 5,980 people 2,005 will travel to and from the site by public transport in the peak hour of 8am to 9am, this would equate to 26 buses (approx.) an hour (2,005 people / 80 bus capacity).

Table 9-2: AM and PM Peak Hours 5,980 Delegate Capacity Convention Public Transport Passenger Trips

Time Period	Bus Passenger Trips			Coach Passenger Trips		
	Arrive	Depart	Two-Way	Arrive	Depart	Two-Way
08:00-10:00	4011	0	4011	446	0	446
08:00-09:00	2005	0	2005	223	0	223
17:00-18:00	0	4011	4011	0	446	446
16:30-18:30	0	2005	2005	0	223	223

Although this may not be so much of an issue in the AM peak when the distribution of vehicles can be spread to meet the staggered arrival times the departure of conference attendees would require a significant number of buses to be available for loading. The assumed 50% arrival rate between 8am-9am and 9am-10 is accepted but the departure rate would be different with a higher percentage leaving in the 5pm-6pm peak period, the expected departure rate is more likely to be in the region of 75-80% and therefore the bus passenger trips should be amended to reflect this. Based on a 75% departure rate this would equate to 3,009 people leaving between 5pm-6pm requiring a provision of 38 buses in that hourly period. Again based on this the proposed 13 bus stops with 20 waiting spaces would appear insufficient to accommodate this demand and additional bus stops required.

It is assumed that the departure figures stated in Table 9-2 above are an error and should be reversed as more people are expected to leave in an hour period as opposed to the 2 hour period.

Clarification is required as to why Table 9-2 illustrated above stipulates 4011 bus passengers but Table 8-4 states 4323 people using public transport.

As stipulated above the proposal includes the provision of 26 bus trips an hour for a two hour period in each of the peak hours. Although this is less than the demand for a football match the vast majority of bus / coach companies would have far fewer spare buses available given that these trips will be within the peaks. The proposal is based on a high number of attendees traveling by public transport therefore it is essential that the applicants can source the required level of buses. The applicants should therefore undertake a feasibility assessment to ascertain whether the provision of buses can be obtained and if they cannot what measures would be put in place to provide that level of buses.

Access Arrangements

It is proposed that a new stepped and ramped access will replace the current steps at the northwest side of the site, connecting it to Green Park, the cycle routes within Green Park

that connect to the wider cycle network and Green Park Station when built.

Steps are proposed that link to the Public Right of Way (PROW) route 27 into Green Park located alongside Costco, however no ramped access is proposed as per the link on the northern side of the site. I appreciate that there is a significant level change but has the possibility of a ramped access been assessed as this would be a significant improvement to the existing situation.

The main access to the Royal Elm Park site will be from the existing vehicle/pedestrian accesses on the A33 and the public cycle/footpaths within Green Park.

A new internal road network will connect to the existing carriageways of Northern Way & Biscuit Way which in turn provide access to the A33 via Bennet Road Gyratory and South Oak Way respectively.

The internal link road/primary circulation route will connect these two access points splitting the site into two zones within which a pedestrian environment will dominate. The eastern zone will contain the Stadium, Conference Centre, Hotel, Ice Rink, Multi-Storey Car Park (MSCP) and Residential Block 7. The western zone will contain Residential Blocks 1 to 6 and a linear park.

This primary circulation route will provide access to the majority of the proposed development and retained site uses. Secondary access points on Northern Way and Hurst Way will be retained and provide access to the rear of the stadium, via Shooters Way.

A set of tracking diagrams have been provided for the internal link road but none of these appear to include two-way bus flow through the site, an updated drawing should be provided to include bus tracking but as mentioned above we do have concerns over the currently proposed route for existing Green Wave bus service.

With the exception of large event days such as football matches or large conferences/concerts this link road will be open to two-way through traffic allowing access to all the site from either of the connection with the A33. On match/event days access will be restricted to allow the proposed bus hub, located on the northern boundary to act as a dedicated public transport interchange. In this situation, vehicle access to Blocks 1 to 7 and the MSCP will be retained but via South Oak Way / Biscuit Way only.

In principle this is deemed acceptable to remove the potential for conflicting movements and ensure the unimpeded movement for the proposed public transport provision. However it is noted that the carriageway located at the south western boundary of the multi storey car park reduces in width to 4m (approx.). This is insufficient to accommodate a bus and a car and therefore some priority measure would be required, however this does not appear to have been fully demonstrated. Given that this route would be the only access and egress point on match days and during large events for the residential and non-match / events public transport the carriageway should be sufficient to accommodate two way bus movement at all times.

The access and egress arrangements for the multi storey car park and residential Block 1 opposite implies that these uses would have priority over the main flow of traffic including buses through the site. Further clarification and revised drawings should be provided to confirm that the internal link road will be provided with priority and how this would be gained. As stated above this route would be the only access and egress point on match days and during large events for the residential and Green Wave bus services, it is therefore essential that the internal link road is given priority.
I am aware that on match days a significant amount of supporters on foot walk along Biscuit Way / Hurst Way to access and egress the football stadium, with egress being especially congested with pedestrians utilising vast amounts of the carriageway as well as

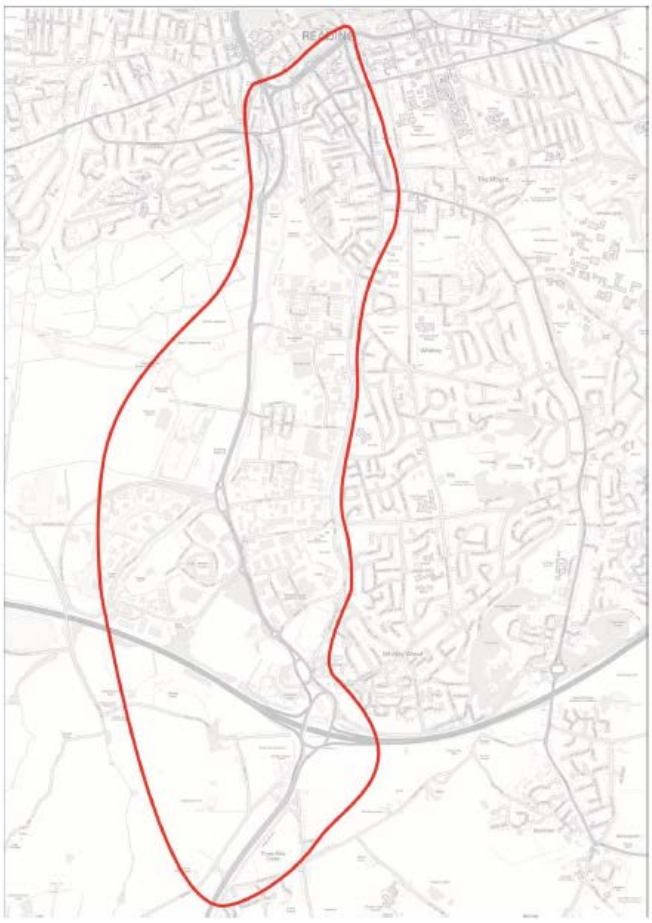
the footways. This is one of the reasons why there is a delay in vehicles being allowed egress from the car parking on site. Although there may be some supporters that utilise the subsidised public transport there is still likely to be significant levels of pedestrian movement in this area. Clarification must therefore be provided on how this will be managed to ensure that access and egress will be maintained to the residential properties and does not detrimentally impact pedestrian safety of supporters exiting the stadium.

The outline access arrangements for the residential properties have not been fully detailed so I am unable to ascertain whether they are sufficient to accommodate the proposed level of development. The layout should be in accordance with DfT document Manual for Streets.

Junction Assessment / Trip Rates

The transport network has been assessed using a SATURN (Simulation and Assignment of Traffic to Urban Road Networks) Model that has been produced using data from the Reading Model. The model data has been updated to include Manual Classified Count Data, Permanent Automatic Traffic Count Data and RBC Bluetooth Data. This approach was agreed during the pre-application discussions and is therefore acceptable. The extent of the area that has been modelled can be found below:

Figure 2-2 Cordon Model Area



The committed developments in the area have been included within the assessment and the trips rates for these have been obtained from the relevant transport assessments (TA's) which is acceptable. TRICS data has also been used however it has not been demonstrated which developments TRICS data has been used and what the TRICS data is so that it can be agreed. This must be clarified to ensure that the background flows are acceptable.

The conference centre has been assessed based on a maximum provision of parking being 500 spaces however this differs from the parking assessment that stipulates that 450 car parking spaces will be available. Although the actual parking requirement should be clarified the assessment undertaken would be robust and as a result I am happy.

The Convention Centre mode split is illustrated within Tables 8-4 and 8-5 and not withstanding what has been identified above the vehicle trip generation does not appear to correspond to the number of vehicles but the number of passengers. Table 8-4 identifies 799 car and taxi passengers combined while the number of vehicles is actually 650. A similar calculation has been applied for Table 8-5. If the figures specified within Tables 8-6 and 8-7 have been applied to the Saturn Model then this will be result in a significant over estimate of increased traffic flows.

Table 9-2 highlights the number of bus passenger trips that would be generated with Point 9.1.7 stipulating that 26 bus trips would be required. From my calculations this is per hour e.g. 8.00-9.00 and 9.00-10.00 however as no table illustrating bus movements has been provided it should be clarified whether the model takes account for two way movements.

The residential trip rates that have been stipulated are acceptable but this is subject to a comparable public transport provision being provided. As has been detailed above there are concerns regarding the future operation of the existing green wave services as a result of the proposed layout. If a revised layout is not forthcoming then revised trip rates would be required that incorporate a reduced public transport provision serving the site.

The residential trip rates for the AM and PM peaks stipulated within Tables 8-6 and 8-7 are in line with those within Table 8-1, but no trip rate information has been specified for the 19.00-20.00 and 22.00-23.00 to clarify that they are acceptable. The proposed residential trip rates for these periods therefore must be clarified.

For the hotel use Point 8.3.4 stipulates that as a worst case, it is assumed that all person trips to/from the hotel are made by car drivers. As a result the trip rates specified in Tables 6-12 and 6-13 should correspond with Tables 8-6 and 8-7 but there appears to be a 50% reduction applied on certain arrivals and departures. This should therefore be clarified or revised so that the figures correspond.

No formal trip rate assessment has been undertaken for the office use but a robust assessment has been applied based on the car parking spaces allocated to this use and is agreed.

All other trip rates have been assessed and are acceptable for the AM and PM peaks.

The above should be reviewed and if appropriate the impacts of the development reassessed through the Saturn Model if significant revisions are appropriate. Notwithstanding the above I comment on the Model as follows:

Based on the data provided at present the outcome of the model assessment is that significant delays would occur at several junctions along the A33 Corridor. It should also be noted that the model has assumed that the Mass Rapid Transit (MRT) and Green Park Station will both be operational and a proportional amount of base traffic flow has been reduced to reflect this. No assumptions have been made that trips associated with the development will utilise these forms of travel.

The details of the delays are specified below:

AM Peak Period

Junction 11 will experience delays on the A33 Northbound approach resulting in an increased delay of around 200 seconds, or in excess of 3 minutes. This will have a detrimental impact on the flow of traffic heading into Reading and is likely to have a subsequent impact on the proceeding junctions along this route.

There are also delays on the West Bound slip equating to 8 to 9 seconds per turn and the East Bound Slip equating to 24 seconds. It has been stated that it should be possible to reduce this delay by adjusting signal times plans at the top of the slip road where there is reserve capacity, compared with the Reference Case. I have discussed this with the Network Management team and even if there were any reserve capacity within the junction this would need to be used to accommodate the 3 minute delay on the northbound approach to the junction.

The A33 / Imperial Way Roundabout and A33 / South Oak Way Roundabout will experience delays of 30 seconds and 37 seconds respectively heading Northbound in the AM Peak. There are already considerable delays at these roundabouts during the AM Peak period caused by right turning movements and therefore the proposed delays would have a significant implications for the effect movement of traffic along the A33 corridor.

The above scenarios are based on a worst case scenario when a maximum capacity conference would take place although generally there is minimal impact when a smaller conference takes place e.g. 2.4% increase over the whole modelled area. There is however still an increased delay heading north of 37 seconds at the A33 / South Oak Way Roundabout therefore although the overall increase is low the development could still have a considerable impact on the operation of a single junction as I have stipulated above.

PM Peak Period

In the PM Peak there are delays at the A33 / Imperial Way Roundabout of 203 seconds, or in excess of 3 minutes heading Southbound and 192 seconds again in excess of 3 minutes on the left hand slip from Imperial way heading south onto the A33. These are in addition to some significant delays at these points in 2021 yaking account of no development, the worst of which is the A33 Southbound resulting in a queue of 6 minutes. This again would have major implications for the vast majority of the A33 heading south. I have discussed the implications of this delay with the Network Manager and we are in agreement that this is likely to result in queues reaching beyond the A33 / Rose Kiln Lane signalised junction and therefore we are concerned that the two junctions prior to the A33 / Imperial Way roundabout namely the A33 / South Oak Way and Bennet Road Gyratory both have very limited impact for flows heading south. Detailed clarification is therefore required on this point.

The Bennet Road Gyratory will result in a delay of 37 seconds from the Northern Way approach, this will have a detrimental impact on the exit of buses serving the Green Wave service and will also slow down the exit of the bus shuttles to the town centre. This will not encourage the use of alternative modes of travel and is likely to result in the number of Green Wave services serving the site reducing which in turn will increase the car journeys to and from the site.

The above is based on a worst case scenario when a maximum capacity conference would take place with minimal impact when a smaller conference takes place e.g. 2.7% increase over the whole modelled area and no considerable impact identified.

The whole modelled area when a maximum capacity conference is accommodated results in the AM Peak over capacity queues increasing by 26.0% and in the PM Peak by 21.9%,

which would have detrimental implications for the A33 as has been identified above. Point 12.3.11 of the Transport Assessment states that *it is clear that an event management plan will need to be put in place to seek to manage and peak spread discharge rates from the site*. An event management plan has been included within the Transport Assessment but at present this lacks any detail to give comfort that the proposals would not result in any significant implications for the A33 and the surrounding network.

A detailed framework event management plan must therefore be submitted that provides a mechanism to peak spread the trips to and from the site to reduce the impact of the development on the surrounding highway network. This is imperative especially given that any delays in the PM peak, as currently modelled, would roll into the arrivals for evening matches resulting in a far worse situation. I appreciate that some level of forward planning can be provided to avoid match days but conference / events of this scale are scheduled well in advance while there is scope for matches to be rearranged for television and cup participation with limited notice. I envisage that the applicant would resist cancelling a maximum capacity booking with only several weeks notice as this would not look favourably on the venue and could have implications for future business.

The assessment should therefore extend to include the lead up to an evening match based on the above outcomes of the PM peak assessments. The evening match day should therefore be assessed between the hours of 18.00-19.00 and 19.00-20.00, I am happy that no assessment is required following a evening match day given the limited vehicles that would be on the network at this time.

No assessment has been undertaken for a Saturday match day event on the basis that the number of match parking spaces are reducing and there are less spaces overall on the application site. However, given the parking on the application site would have a different impact to match day parking, the impacts the development would have on a match day must be assessed.

Parking

The applicants have undertaken an assessment of the surrounding area to ascertain overspill parking that occurs on a match day. The survey recorded a difference of 431 parked vehicles within the agreed survey area, 1098 vehicles on a match day and 667 vehicles on a non-match day. Given the loss of car parking on the site the development will need to contribute towards any overspill parking that could occur as a result of the development.

Commercial Parking

The development will result in a reduction of on-site parking for existing football and stadium events, the proposal however does provide for shared use of parking for the hotels, convention centre and other facilities.

Parking on site will be re-provided into two main car parks. One, a multi-storey car park with circa 616 spaces, and the other a two storey car park within the conference centre providing circa 129 spaces. A further 93 ground level spaces are provided on the site and 79 spaces will be retained around the stadium providing a total of 917 spaces, approximately half of that currently available on matchdays.

The parking on site is broken down as follows:

The proposed Hotel has a provision of 246 beds, in accordance with the Councils adopted parking standards a parking ration of 0.5 spaces per room is required equating to 123.

The conference facility would accommodate a varied number of people and the Councils

standards request a maximum provision of 1 space per 7.5 seats. The maximum number of seats that would be provided within the Main Ballroom (2,100 seats) and Mini Banquet Hall (1,400 seats) equates to 3,500, the maximum provision required would therefore be 467 car parking spaces. The applicants have stated that the proposed provision would be at 75% of this provision therefore equating to 350 spaces. In principle I am happy that this level of parking would be acceptable subject to some on street parking management to ensure overspill parking does not occur.

The ice rink is to be provided with a provision of 100 spaces, the Council have no specific parking standard for this use so it would need to be assessed on its own merits. It is however noted that no clarification has been provided as to why this provision is deemed an acceptable level of parking and therefore this should be provided.

It is noted that the ice rink on occasion could be used as part of a conference / exhibition space however it has been confirmed that if this occurs the ice rink parking will revert to conference / exhibition parking.

102 serviced apartments have been proposed with no car parking provided for this use. The Council have no specific parking standard for this use which could demand parking in its own right therefore justification would be required as to why no parking would be acceptable and how this would be managed.

A provision of 6 restaurants and café units have been proposed which would be located on the ground floor of the convention centre, the proposal indicates no car parking is proposed for this use. During pre-application discussions with the previous Transport Development Control Manager this was agreed given that these facilities were would mainly be ancillary to the overall development and therefore used by persons living on site, using the conference/ice rink or attending football matches. I am in agreement with this view given that any dedicated trips to these facilities are likely to be made outside of the peak demands for the surrounding uses and therefore can share the parking provision which complies with national advice.

A provision of 471.9m² of Retail floor space is proposed but as per the above this is unlikely to generate any significant primary trips with the majority of custom coming from within the development as part of a linked trip. I am therefore happy that no dedicated parking for this use is required.

A provision of 1,855m² of office use is proposed on the site with a provision of 20 spaces proposed, this has been calculated at 50% of the Councils adopted standards requesting 1 space per 50m². The office use would have the same peak periods as many of the other uses on the site and therefore cannot be included within any shared parking throughout the site, if any relaxation from the standard is to be proposed then this would need to be justified with details provided as to how this would be managed to ensure that sufficient parking is provided for all uses.

The existing Millennium Hotel currently has two dedicated car parks providing a total of 153 parking spaces. As part of the development of the public square a proportion of parking will be removed. This will be re-provided within the new car parks. 22 parking spaces (including 3 disabled spaces will be retained close to the reception and will share access with the drop off and taxi rank.

The parking for the above uses are to be located within the multi storey car park (616 spaces) and the conference centre car park (129 spaces). All of these spaces are proposed to meet the demand for the development with the Transport Assessment stating:

'the overall level of parking provision can be lower than for individual site uses as the provision will account for varying demands and peaks across the site. Ongoing event

management plans will monitor actual parking use to ensure the most efficient operation.'

I am happy to accept that not all parking would occur simultaneously and therefore the parking demand could be lower. However this would be dependent on detailed parking management proposals to specify how the parking across the site will be controlled.

The parking assessment however takes no account for the 100 Park and Ride spaces which as part of the Transport Assessment has been confirmed as being retained. Even if you take shared parking levels for the other uses on the site I do not envisage that this would equate to 100 spaces being spare to be utilised for this use and therefore additional parking would be required on the site.

Full detailed plans should also be submitted clarifying the location of the Park and Ride spaces within the Multi Storey car park. For clarity and to promote the shift to public transport into the town centre these spaces should be located closest to the entry and exit points of the car park to ensure they are not caught in queues behind one-off users at the beginning / end of an event. This would deter commuters from using this Park and Ride facility in future and could lead to them travelling into the Town Centre by car.

Detailed clarification is required as to how the car park would be managed for all the proposed spaces. It is stated that vehicle registration recognition will be utilized and it is accepted that this will help with the proposed uses on the site but no clarification has been provided on how the Park and Ride spaces would be managed. Park and Ride customers would not be able to provide car registration details in advance and therefore management procedures need to be put in place to ensure these spaces are not misused.

Level pedestrian access to the multi storey car park is located at the south western boundary and therefore is not overly convenient to access the transport interchange or the adjacent uses. Although a separate access is provided from the north eastern boundary this would not provide level access and would require the use of stairs. Clarification should be sought as to why a convenient level access cannot be provided.

In addition to all of the above parking a provision of 172 existing spaces are to be retained for the football club, which is deemed acceptable in principle. Following investigation into the stadium expansion permission it appears that a provision of the agreed stadium parking will now be lost to accommodate the away supporters coach layby and the new road to the south of the new multi storey car park. As a result full details of the proposed 172 parking spaces should be provided.

Residential Parking

A total of 830 dedicated residential car parking spaces will be provided to support the development. A minimum of 692 resident and 138 guest parking spaces will be provided to serve 633 residential units in line with the minimum parking requirements shown in the table below from the Transport Assessment.

Table 3-2: Minimum residential parking requirements

Unit Type	Unit Number	Parking Standard	Parking Requirement
Studio	73	N/A	0
1bed	147	1 per dwelling	147
2 bed	281	1 per dwelling	281
3 bed	110	2 per dwelling	220
4bed	22	2 per dwelling	44
		Total	692
		Visitor Parking at 20% of residential parking	138
		Residential parking requirement	**830**

The National Planning Practice Guidance, March 2014 (NPPG) has shifted the requirements away from parking restraint and states "Maximum parking standards can lead to poor quality development and congested streets, local planning authorities should seek to ensure parking provision is appropriate to the needs of the development and not reduced below a level that could be considered reasonable." This is especially the case for origin destinations such as a residential developments and the latest evidence clearly shows that a reduction in residential parking does not result in reduced car ownership but leads to various parking issues. The latest research document published in February 2014 by the Housing Minster at Westminster "Space to park" recommends 1 space per 1/2 bed dwelling, 2 spaces per 3/4 bed dwelling with at least a 20% provision for visitor parking on street. It is the government's attention that this guidance should be followed. The document also clearly details poor design which has implications for safety such as driveways which are not long enough to accommodate a vehicle or roads which are too narrow to allow service vehicles though if vehicles are parked, both of which lead to footways being obstructed by parked vehicles. The document can be found on the web at this address http://www.spacetopark.org/.

The above residential car parking provision generally complies with the latest Government advice and is the acceptable in principle. The only deviation is that no car parking has been provided for the studio apartments, during pre-application discussions with the previous Transport Development Control Manager, he agreed that *'it would be acceptable for the 54 proposed studio apartments to have no parking if some form of agreement were in place to control this'*. Although the proposal now includes additional studio apartments I am still happy with this approach but further information / clarification is required as to what agreement or parking restrictions will be put in place to control overspill parking. The Transport Assessment does state when clarifying residential parking that 'the residential parking will be managed so that only those living there or their guests will be able to use the spaces in order to deter public use of the spaces' however this does not clarify how parking associated with the studio apartments including visitors will be restricted.

If no management of parking can be agreed then dedicated parking for the studio apartments will be required.

The location of the residential parking for Blocks 1 to 7 will be within dedicated parking areas located at the ground level, the majority within the curtilage of each building to minimise the visual impact. On street parking for visitors will be provided between the blocks. Access to the undercroft style car parks will be via a series of service roads which

spur off from the main internal access road and via a shared surface spine road which runs the length of the central park area.

The undercroft parking layout for the residential generally complies with policy however a few of the car parks will be linked through an electronic gating system but details on the type of system have not been provided. I am concerned that several of these gates are directly adjacent to parking spaces and or parking aisles and therefore if any pass / fob key system is required to operate the gating system this could have implications for the parking provision. Fully detailed plans of the gating system should therefore be provided at the reserved matters stage to ensure that adequate parking in accordance with standards can be provided.

Block 7 However is to accommodate 203 units broken down as follows:

House / Dwelling Type	**Units Provided**	**Required Car Parking Provision**
Studio	60	0 subject to on-site parking management
1 bed	74	74
2 bed	65	65
3 bed	4	8
Total	**203**	**207**

In addition to the above a provision of 40 visitor spaces are required equating to a total number of 247 spaces.

The application currently only proposes a provision of 178 spaces as stipulated at *Section B7. Access and Movement* stipulated within the Design and Access Statement. This provision of parking does not comply with the required car parking provision of 207 spaces nor does it include any visitor spaces. It is noted that within the red line plan for the full application a proportion of parking is included but this still does not provide for sufficient car parking to meet current standards of 247 spaces. Revised proposals should therefore be submitted demonstrating a parking provision that complies with standards.

I have not assessed the full car parking layout and allocation of the residential units contained within the Outline application as this will be dealt with at the reserved matters stage.

The Transport Assessment states that the development includes the provision of a car club and parking bays will provided as part of the development. Car clubs offer a flexible alternative to owning a car therefore given the size of the development a car club is required to comply with policy. The Councils Parking SPD stipulates that a minimum provision of 2 spaces, however given the commercial uses on the site including the hotel and serviced apartments a provision of 4 spaces should be provided. These should be split 50/50 between the residential and the commercial elements and should be conveniently located to meet the demand for each. A revised drawing should therefore be submitted illustrating the location of the proposed car club spaces.

Cycle parking

The cycle parking provision for the site is to be in accordance with the below table, this is deemed an acceptable provision across the site and will help promote cycling as an alternative mode of transport.

Land Use	**Parking Ratio/Requirement**
Cycle parking (Conference,	500 covered spaces

Hotel & Stadium Use)	
Cycle Parking (Residential)	0.5 space per C3 Dwelling Flat 1/2-bed 1.0 space per C3 Dwelling Flat 3+-bed
	Total Number of Spaces Required

Cycle parking will be provided across the site with a large indoor cycle parking facility capable of holding up to 294 bicycles located in the basement of the Multi-Storey car park. These spaces are in the form of Sheffield type stands and provided with adequate manoeuvrability, these spaces are therefore acceptable.

A further 208 covered spaces distributed across the site as follows:

☐ Covered external Rack 22 Sheffield stand / 44 spaces located outside entrance to Millennium Hotel
☐ Covered external Rack 48 Sheffield stand / 96 spaces located North West corner of the stadium
☐ Covered external Rack 34 Sheffield stand / 68 spaces located adjacent to the North Stand of the stadium
☐ Several smaller racks of Sheffield stands will be located around the site, mainly located along the linear park in order to provide short term visitor parking.

It has been stated that these are illustrated at Appendix A but the drawing does not illustrate the exact location of these cycle spaces. A revised drawing should be submitted illustrating the exact locations, the layout of the Sheffield stands to comply with the Councils adopted requirements and the form of covering proposed.

The cycle parking for Block 7 provides for a provision of 244 cycle spaces which is in excess of the required provision so in principle is acceptable. The submitted plans however do not illustrate the cycle parking to be in the form of Sheffield type stands. The form of cycle parking should be demonstrated so it can be determined that sufficient space is provided to accommodate the spaces and access / egress to each cycle space.

Cycle parking for the remaining residential units will be provided separately within each block in accordance with RBC standards.

It should also be noted that a provision of Readybikes are currently located on the site that do not appear to have been detailed. It is anticipated that the proposed buildings would be located in their current position or they would be located to the rear of the conference facility which will not be a suitable location to promote their use. A drawing should be submitted illustrating their position to be conveniently located on the site. It should be noted that the applicant would be responsible for the relocation of this cycle facility.

General Layout

Deliveries to ground floor of the convention centre / restaurants are illustrated on drawing 32605-013 A but it is evident that the tracking as illustrated results in vehicles driving over footways/verges and having to drive on the opposite side of the carriageway. This is detrimental to highway and pedestrian safety and therefore revised tracking diagrams are required.

Drawing 32605-005 A illustrates the tracking for the Outline element of the scheme and I have a query regarding the tracking located to the north of Block 2. The turning area is located within the landscaped area situated in the centre of the blocks but I can see no reason why this would be required. The tracking also results in a refuse vehicle having to

drive over a significant length of the footway to the detriment of pedestrian safety. Given that the refuse vehicle would need to serve Block 2 I would expect the turning area to be within the carriageway opposite.

Drawing 32605-015 B illustrates the tracking of a fire appliance located to the south of Block 1, however the tracking of the vehicles goes through a Sheffield cycle stand, a revised tracking diagram is therefore required or the Sheffield stand relocated.

Drawing 32605-020 illustrates the tracking of buses entering and exiting the interchange, it is evident from the drawing the amount of crossover that would be required by vehicles. Although the movements can be accommodated within the area I do have concerns that the level of vehicles having to crossover the carriageway would negatively impact the effectiveness of the interchange operation as vehicles will be having to wait while other vehicles manoeuvre into position.

Two taxi ranks have been proposed one located to the south of the multi storey and one to the north of the convention centre. Although I appreciate that these are suitably located to their main destinations I do have concern over the operation of these facilities. It is noted that the proposals assume a significant number of taxi trips within an hour and the proposals include egress arrangements within close proximity on at other junctions leading to conflicting movements. Revised taxi rank proposals should therefore be submitted.

The applicant should provide amended plans, clarification / justification on the above points so that the full impacts of the development can be assessed.

2) STAR

1. The Reading Football Supporters' Society Limited (trading as Supporters' Trust at Reading and known commonly as STAR) is the officially recognised and only organisation for supporters of Reading FC. It is a Community Benefit Society registered under the Co-operative and Community Benefit Societies Act 2014; being established in 2002 as the successor of the Reading Football Supporters' Club.

2. STAR's UK membership at 18 March 2016 was 1384 of which 1070 reside within the RG postcode area and 314 outside. STAR considers that a significant proportion of its membership comprises regular match going supporters at the Madejski Stadium. Within a range of 7.20% and 18.65% STAR's membership equates to an average of 9.40% of home supporters attending the 23 matches held at the Madejski Stadium during the current football season (up to 18 March 2016).

3. STAR would like to begin its response to these proposals by quoting from the "Planning Statement", at page 58 paragraph 10.12 which says, *"Ultimately, Royal Elm Park delivers facilities that will benefit local people and communities,* **place RFC supporters and visitors and their experiences at the heart of the proposals** *and creates and identifiable living, work and socialising destination within South Reading."* STAR is not convinced that it does.

4. That having been stated, STAR is not against the development *per se* as, providing the concerns of Reading Football Club's supporters are adequately addressed, it welcomes the development as positive for the community and the town and will enhance supporters' match day experiences by providing a pleasant environment, which will encourage supporters to prolong their visit.

5. This response consists of 2 parts; (i) an observation of the structure of the companies comprising the Reading Football Club group of companies and (ii) an objection to the proposals based on the inadequacies of the transport plan in relation specifically to Reading Football Club football matches held at the Madejski Stadium. STAR would like the Council and its Officers to consider these two issues of crucial importance from the view of Reading FC supporters.

6. **OBSERVATION:** Firstly the Council is doubtless aware of the history of the site and how the land came to be virtually given to Reading FC, partly in recognition of the Club's community role as the most significant sporting institution in the town. STAR is concerned that the new and complex web of companies (please see the accompanying diagram – appendix 1) surrounding the Club could quickly and easily give rise to a situation where the Football Club, as a wholly owned subsidiary of the Reading Football Holdings Limited has no influence on, and gains no reward or benefit from, the developments of the RFC Prop Co Ltd. Indeed the annual return of RFC Prop Co Ltd, which was filed at Companies House in November 2015, shows that its shareholding is owned jointly by Empire Assets Group – an organisation registered in Singapore that is recorded as owning 75% and Reading Football Holdings Limited owning 25%.

Whilst the annual return shows this to be the position STAR is led to understand that the final transfer of shareholding in RFC Prop Co Ltd from the Football Club to Empire Assets Group will not be completed until after planning permission for the development is granted by the Council.

7. Owing to the complex nature of the group's structure there is little financial transparency and scrutiny of its financial position is difficult.

8. It is just under 20 years since the original Section 106 commitments were made to provide on-site parking at the stadium for between 600 and 2000 cars. Now there is the prospect of very little on-site parking and the surplus value of the land being realised neither by the Football Club, its supporters nor the local community. STAR would ask the Council to consider what safeguards can be put in place to ensure that the Football Club itself retains an interest, both financial and in terms of ownership, in the development – as we are sure would have been intended 20 years ago.

9. **OBJECTION:** Our second point relates to the Transport Assessment and in particular the significant reduction in car parking provision on and around the site on match days without the provision of adequate, viable, cost and time effective replacement options. STAR believes these proposals put the development, not the Reading FC supporter, as the focus. The proposals rather assume the world to be as the transport planners would like it to be and STAR is not re-assured by their reliance on public transport as the solution to all supporter needs. STAR considers that if adequate on-site parking is not provided then there is a need to provide alternative parking sites within walking distance to supplement enhanced public transport.

10. Reading Football Club's own 2014/15 survey shows that travel ranks second as a focus area for the Club to address with a recommendation that it should develop a strategy using the survey results, which is communicated clearly to fans, *"demonstrating consideration that their feedback is being utilised"*. The feedback shows that the majority of supporters (70%) prefer to travel by car; with around 20% using public transport (of which significantly fewer than half use a train followed by bus). The major reason cited is that driving is easier and cost effective. The survey results indicate that car occupancy averages at 2.3 people per car.

11. STAR's belief, which is clearly reinforced by the evidence in the Club's survey, is that the success (in terms of attendances) of the Madejski Stadium is in part down to its convenience for supporters who drive (some from long distances). The Madejski Stadium is an out-of-town, motorway exit location, not well-served by regular and frequent public transport. It is with concern that we note that there is no requirement by the Council (paragraph 3.4.2 of the Transport Assessment) that parking is required for football matches nor acknowledgement of a demand for it.

12. In brief, our concern is that the large and significant loss of close-to-the stadium parking spaces will damage the whole "ecosystem" of support for the Club. It will become much less attractive for certain types of supporter to visit, including:
a. the elderly, infirm and disabled:
b. families with small children: and
c. supporters who travel from places outside the existing match day bus network.

13. The absence of these types of supporters, especially from midweek matches, will have a knock-on effect on the take up of season tickets (why bother having a season ticket if you have to pick and chose matches to attend and can always get in to watch a match in any event?) and the long term financial viability of the Club. Taking the long view one cannot assume the Club will always retain or improve on its current Football League status. If the proposed public transport system becomes non-viable in bad times and if supporters cannot drive to be near the stadium then the Club will surely shrink in its more isolated location?

14. We can add some detail to this hypothesis. The current major parking resources in easy walking distance are:
a. at the stadium (800-1600 spaces depending on how Park & Ride spaces are used):
b. Cordwallis (500); and
c. the former speedway stadium site (500 - 800).

15. Worton Grange, which hosted 800 spaces, has closed recently, the former speedway stadium site may become a development site also and the proposed multi-storey car park of 600 spaces will face demands from other users on match days (ice rink, conference centre, hotel, staff etc) as well as being harder to exit than existing on-site car parks.

16. Taking into account the loss of:
a. 900 spaces at the Madejski Stadium;
b. 800 at Worton Grange; and
c. 430 street parking places in Whitley as part of the street parking management (based on the number of extra vehicles street parked during the Reading FC match with Brentford that is cited in the proposal) this exceeds 2100 fewer car parking spaces within walking distance of the stadium. At an average occupancy of 2.3 people per vehicle this equates to around 5000 supporters being impacted adversely (around 30% of the average number of attendees at football matches this season) STAR would not argue with managing street parking in Whitley, but as that will significantly further cut down car parking capacity for visitors to the stadium it needs to be offset. The proposals also talk of the "exploration" of "remote parking areas" in a rather vague and inconsequential way.

17. In essence the transport proposals rely on shifting people from cars to public transport in order to maintain their support for the Club. Is this realistic for the fan? Is it viable for the Club? It is difficult see how approximately 5000 people can be easily encouraged to move onto public transport.

18. It is our understanding that Green Park Station will not open until 2018 at the earliest and, unless the line is electrified (which, whilst it has been identified for electrification, is understood to be unlikely in the short term), the service timetable on this line will be roughly as it is now (2 trains per hour in each direction) and therefore is likely to add little to public transport capacity. In particular STAR does not accept the estimate at paragraph 11.5.1of the Transport Assessment that, *"a total of 2,400 supporters per hour could be transported by train over a 2 hour period (based on 4 trains in each direction over a 2 hour period)."* This makes assumptions that an equal number of supporters will travel from each direction (i.e. from Reading or from Basingstoke) and that train time tabling will allow sufficient time to walk to the Stadium before match kick-off. Equally, it cannot accept that there is the potential (paragraph 11.5.2) to reduce the number of buses by 30 as that again assumes an equality of travellers from each direction.

19. Looking at the park and ride facility at Shinfield Park that is not fully utilised on match days. It is not conveniently located, takes too long to reach after matches and is not easy to exit quickly. In short it is not an attractive option for most supporters – which is why it is underutilised.

20. Therefore there is a great reliance on local buses to make up the shortfall. For many people, and particularly for midweek matches when time is at a premium, buses are not a solution. Supporters do not all live within walking distance of a bus-stop; some will have to drive and pay parking charges when they get to the bus departure point. We do not know how many supporters will be well out of range of these bus services but 30% of STAR's members have non-RG post codes (and because of the benefits we offer our members they are more likely to be local than an analysis of all supporters would show). We do not see any strong evidence of matching the transport solutions to the geographic profile of known football supporters and we are concerned an easy, but possibly fallacious, assumption has been made about their proximity to, or within, Reading. If STAR's membership geographic profile is anything like typical of the profile of the Club's overall supporters then around 30% of those potentially supporting the Club are residing outside easy reach of public transport alternatives.

21. Figure 3.2 in the PBA document (p36) has a map showing locations of past and present season ticket holders but offers no quantitative analysis of the distribution and excludes,

by virtue of its boundaries, more distant supporters from London, Oxford, Swindon and elsewhere. We can find no analysis of the current number of cars driven to matches and therefore the current requirement of car parking spaces. If we take the example of a 20,000 crowd of whom 70% get to the match by car with 2.3 people per car (away supporters will not be significantly different from home supporters in transport choice for a well-attended game) this would generate the need for 6087 spaces. Whilst these are the best metrics we have the figure of 6000 spaces being used is not credible. Scaling down to 50% arriving by car at 2.5 per car still generates the need for 4000 spaces.

22. STAR acknowledges and welcomes the proposal for ticketless buses and the enhancement to the number of both shuttle and scheduled services (paragraph 13.8.3 of the Transport Assessment), but it considers that the proposed enhancements are flawed in a number of ways:
a. Where it is envisaged that 1 vehicle will make more than one journey (e.g. F10, F11, F12, F13, F14 etc.) no allowance has been made for the time taken for an empty return journey to the departure point – both before and especially after matches, when a large number of supporters want to leave the stadium in a short period of time. By way of example STAR estimates that a return trip of the F14 to Henley could easily be 2 hours.
b. Shuttle buses to and from Reading town centre on a Saturday afternoon are often caught up in town centre traffic delaying their return to the Stadium.

23. The Transport Assessment makes an assumption that where, *supporters are arriving from further afield it is expected that the majority will arrive at Reading Town Centre and will use shuttle buses to undertake the journey to the stadium.* It also assumes at paragraph 13.9.2 that the closure of the Worton Grange car park leads to those supporters who normally parked at Worton Grange would, in future, journey by shuttle bus from the town centre. There seems no evidence to support these assumptions and an increase of supporters using the shuttle bus service to and from Reading town centre from 6.25% to 18.28% of match attendees (paragraph 13.9 of the Travel Assessment) seems highly improbable, particularly for evening games finishing around 10.00 pm. Travelling to and from Reading town centre is clearly not an attractive option for supporters arriving from the east, west or south of the Town in terms of significantly increased cost (in parking and/or train fare) and journey times to the stadium. There would clearly be insufficient capacity in the Shinfield Par and Mereoak park and ride sites to accommodate the number of vehicles coming from these directions even if the Shinfield Park and Ride was an attractive option (for supporters coming from the east, through Lower Earley - it is not attractive at all for supporters exiting the M4 at junction 10).

24. There has been public consultation both by the developers and STAR. We forwarded the results of our member survey to the Club and the developers but cannot find any reference to either survey in the planning documents. Our conclusion, based on the feedback from 100 supporters (the developers' feedback was 148 responses, only a minority of whom were football supporters) was: *Amongst regular football supporters by far the most important concern is the loss of 'walk-able' parking spaces near the stadium. For some the proposed public transport alternatives lack flexibility and convenience and there is a danger that this could lead to giving up season tickets. STAR is concerned that, if this were to happen, there would be serious knock-on effects at the Championship or below level: a significant fall in season ticket holding as supporters knew they could pick and choose their matches; a fall in attendances which compromised the volume of users and viability of the public transport network; a consequent reduction in the sense of a big match atmosphere and most importantly a significant fall in the Club's match day income.*

25. Since drawing that conclusion STAR has conducted some basic desk research into the car parking capacities and public transport arrangements at five similar football stadiums; that is new-build stadiums at some distance from the town centre serving crowds of 15,000-30,000. The clubs we considered were: Bolton, Brighton, Coventry, MK Dons and

Swansea. STAR does not believe the REP transport and parking proposals compare favourably with any of these examples.

Club	Parking spaces - on site or park & walk	Additional public transport
Bolton	2300 + nearby business units	Regular rail service (200 yards) – 13 local bus routes
Brighton	1800	3 park & ride - 1600 spaces + high capacity rail link (Falmer station 200 yards). Lewes rail station 200 spaces (+ train)
Coventry	2000 + 300 park & walk	
MK Dons	2000 + nearby bus units	
Swansea	1650	2 park & ride – at least 300 spaces, main line railway 2 miles + 6 regular bus routes

26. STAR believes, in addition to the current proposals, there needs to be more provision for car parking near the stadium, possibly in the form of:
a. Securing the speedway stadium car park on a long term basis;
b. Increasing the capacity of Mereoak park and ride (with additional shuttle bus provision;
c. Formal commitments to opening up some of the under-used spaces in Green Park and other business units within easy walking distance; and
d. Additional park and ride facilities to both east and west of the town (e.g. Winnersh Triangle and Theale Railway Station) would also be beneficial.

The need for this capacity is not just for football supporters but also Convention Centre visitors and also the extreme circumstance when both football and Convention Centre events happen at the same time, as will inevitably be the case.

3) Environment Agency

Original consultation response 21/4/16:
We have **two objections** to the proposed development. One objection is about nature conservation and the river corridor and the other is about potential impacts on ground water quality.

1) Nature Conservation and the river corridor
We **object** to the proposed development as submitted because the assessment and mitigation of the risks to nature conservation are inadequate. We will maintain our objection until the applicant has supplied information to demonstrate that the risks posed by the development can be satisfactorily addressed. We wish to be consulted on the results of any survey submitted in connection with this application, on any design changes, additional mitigation, compensation or enhancement measures that might subsequently be proposed.

Reasons
The assessment/mitigation measures submitted with the application are inadequate and do not properly address the risks. In particular, the proposals do not appear to have addressed the potential for additional shading of the Foudry Brook and its associated corridor, which could impact on the vegetation growing in this area. The proposed buildings are several storeys high, built at the top of the embankment and there is potential for these to add to the shading.

Government policy on minimising impacts on biodiversity set out in the National Planning Policy Framework (NPPF) paragraph 118, requires local planning authorities to aim to conserve and enhance biodiversity when determining planning applications. This has not been demonstrated fully in the present application.

Overcoming our objection
An assessment of the impact of the proposed buildings on the Foudry Brook and its associated corridor is required prior to the development of detailed plans, to enable an assessment of the level of risk posed by the development. The detailed design, construction, mitigation and compensation measures should be based on the results of an assessment carried out by a suitably experienced surveyor using recognised survey methodology. The survey and risk assessment should:
☐ identify the shading impacts of the scheme on the habitats within the Foudry Brook and its associated corridor;
☐ demonstrate how the development will avoid adverse impacts (including the reduction in height of the buildings/relocation of buildings as necessary);
☐ propose mitigation for any adverse ecological impacts ;
☐ propose wildlife / habitat enhancement measures

2) Groundwater Quality and Contaminated Land
We **object** to the proposed development as submitted because the risks to groundwater from the development are unacceptable. The applicant has not supplied adequate information to demonstrate that the risks posed to groundwater can be satisfactorily managed.

Reasons
The site lies on a historic landfill over a secondary aquifer. Our concern is that there is the potential for contamination of this aquifer through pathways formed through the landfill from the development of this site. The use of building piling foundations and any infiltration for surface water disposal could potentially form pathways for pollution to the groundwater aquifer. The groundwater aquifer can be used for drinking water supply.

We are disappointed that documents detailing the measures agreed at the pre-application stage have not been submitted for review with this planning application. This is a complex site and the extensive pre-application discussions were based:
a) on the need to dewater the gravel aquifer under the landfill during the piling phase of construction and
b) the need to address the fact that this site currently has an Environmental Permit.

The site is composed of two layers of landbuild, the upper layer is monitored and regulated with an Environmental Permit and the lower layer is unregulated historic fill (putrescible material). We can't see that the requirements of the Environmental Permit are addressed within the submitted planning application documents.

The monitoring of leachate for the Environmental Permit is for the upper layer of waste only and therefore the quality of the leachate in the lower waste layer is unknown. Monitoring of the groundwater has shown there are significantly elevated concentrations of ammoniacal nitrogen (in the region of 180 mg/l) within the Secondary A Aquifer (gravel) that underlies this landbuild. Review of the drillers' logs for the monitoring wells suggests that wells with elevated concentrations of ammoniacal nitrogen are more likely to be monitoring the lower layer of waste. Therefore these groundwater results may actually represent the concentration of ammoniacal nitrogen in leachate within the lower layer of waste material. When the water table is high (seasonally and during flooding) groundwater is in direct contact with the lower layer of waste. Approximately 5,000 piles will be required for this development. Piling could form vertical pathways for leachate to migrate vertically into the underlying aquifers. The aquifers under the site are alluvium and River Terrace Deposits over the Lambeth Group (all three Secondary A Aquifers) and piling will penetrate through all of these layers as well as the 13 m of waste material that forms the landbuild. The greatest risk for migration of leachate is that the basal beds of the Lambeth Group contain sandy lenses that potentially could form pathways to connect to The Chalk (Principal Aquifer) at depth under this layered landbuild. Nowhere in the documents supplied is the potential risk to this underlying Principal Aquifer (from the use of piling) addressed. For your information previous development on this site included restrictions on the depth of piling (terminating only 3m into the Lambeth Group to avoid the sandy lenses) and on the need for dewatering of groundwater during piling operations. We consider that the extensive pre-application discussions resolved both groundwater quality and environmental permit issues and at the meetings there was commitment to dewater the aquifer directly under the waste.

We can only review the risk of this development to potentially pollute groundwater based on the supporting material submitted with the application and hence in the public domain. Since the document that reflected the pre-application discussions has not been submitted with this current planning application we have no option than to object on the grounds that insufficient information has been supplied.

The National Planning Policy Framework paragraph 109 states that the planning system should contribute to and enhance the natural and local environment by preventing both new and existing development from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels water pollution.

Our approach to groundwater protection is set out in Groundwater Protection: Principles and Practice (GP3) dated August 2013. Please use the following link to this document https://www.gov.uk/government/publications/groundwater-protection-principles-and-practice-gp3

Flood Risk Management
The site lies mostly within Flood Zone 2 with small parts within 3 in accordance with our flood risk mapping. Flood Zone 3 is defined as having a high probability of flooding and Flood Zone 2 a medium probability of flooding. This is in accordance with Table 1 'Flood

Risk' (Paragraph: 065 Reference ID: 7-065-20140306) of the Planning Practice Guidance. Please find the following link to this guidance http://planningguidance.communities.gov.uk/blog/guidance/flood-risk-and-coastal-change/flood-zone-and-flood-risk-tables/table-1-flood-zones/

Sequential test
The sequential test will need to be applied to the proposed development in accordance paragraph 103 of the National Planning Policy Framework (NPPF). There has been a sequential test submitted with this planning application. Please can you confirm to us in writing whether you consider the sequential test to be passed or not. Please confirm whether there are no other reasonably available sites at a lower risk of flooding.

Fluvial Flood Risk
Please note that we may be making further comments on fluvial flood risk in a following letter.

Surface water flood risk
The Town and Country Planning (Development Management Procedure) (England) Order changed on 15 April 2015. The statutory responsibility to provide comments on surface water drainage proposals for major applications has passed to the relevant Lead Local Flood Authority (LLFA) from this date. In this case the LLFA is Reading Borough Council. Please consult the LLFA on the flood risk assessment requirements for surface water drainage.

Flood Defence Consent
Under the terms of the Water Resources Act 1991 and the Land Drainage Byelaws 1981, the prior written consent of the Environment Agency is required for any proposed works or structures in, under, over or within 8 metres of the brink of the Foudry Brook main river.
Please contact West Thames consents for further information and to apply for flood defence consent. Please use the following email address westthamesconsents@environment-agency.gov.uk

Environment Agency Final Consultation Response- including conditions & advice notes

creating a better place

Environment Agency

Ms A Amoah
Reading Borough Council
Development Control
PO Box 17
Reading
Berkshire
RG1 7TD

Our ref: WA/2016/122101/03-L01
Your ref: 160199

Date: 20 January 2017

Dear Alison

Outline application for residential development (blocks 1-6 only) to provide up to 430 residential units, comprising predominantly 1 and 2 bedroom apartments (use class C3) along with associated landscaping and car parking and application for residential and mixed use development comprising: 203 residential units, convention centre and ice rink, 246 bedroom hotel and up to 102 serviced apartments, decked car parking within convention centre, flexible ancillary retail space, multi storey car park, public open space, associated access, landscaping, cycle parking, transport interchange and related infrastructure/engineering works, ancillary facilities, access and demolition of existing indoor training facility and enhancement of existing RFC garden of remembrance.
Land at Madejski Stadium, Shooters Way, Reading, RG2 0FL.

Thank you for your consultation on the above planning application. I apologise for the delay in our response.

Sequential test

The site lies within Flood Zones 1, 2 and 3 in accordance with our flood risk mapping. In accordance with the National Planning Policy Framework paragraph 101, development should not be permitted if there are reasonably available sites appropriate for the proposed development in areas with a lower probability of flooding. It is for the local planning authority to determine if the Sequential Test has to be applied and whether or not there are other sites available at lower flood risk as required by the Sequential Test in the National Planning Policy Framework. Our flood risk standing advice reminds you of this and provides advice on how to do this.

Environment Agency position

We have reviewed Aspect Ecology's Ecology Technical Note, TN1 - Assessment of Shading Effects from the Development on Foudry Brook, dated 22 June 2016. We are able to **withdraw our objection on nature conservation grounds** subject to the following conditions being imposed on any planning permission.

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1) Condition: No development shall take place until a long term landscape and ecological management plan, including long- term design objectives, management responsibilities and maintenance schedules for the Foudry Brook and the area of land between the developed area and the watercourse, shall be submitted to and approved in writing by the local planning authority. The landscape and ecological management plan shall be carried out as approved and any subsequent variations shall be agreed in writing by the local planning authority.

The scheme shall include the following elements:

- details of treatment of site boundaries and/or buffers around water bodies, including the enhancement measures set out in paragraph 4.2 of Aspect Ecology's Ecological Technical Note, TN1 - Assessment of Shading Effects from the Development on Foudry Brook, dated 22 June 2016
- details of any new habitat created on site
- details of the extent and type of new planting (NB planting to use locally native species of UK genetic provenance)
- details of an eradication programme for Himalayan balsam and proposals for how the development will co-operate and contribute to the long term-management/eradication of floating pennywort (*Hydrocotyle ranunculoides*) in the Foudry Brook
- details of maintenance regimes
- details of management responsibilities

Reasons
This condition is necessary to ensure the protection of wildlife and supporting habitat and secure opportunities for the enhancement of the nature conservation value of the site in line with national planning policy.

This condition is supported by the National Planning Policy Framework (NPPF), paragraph 109 which recognises that the planning system should aim to conserve and enhance the natural and local environment by minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures. Paragraph 118 of the NPPF also states that opportunities to incorporate biodiversity in and around developments should be encouraged.

Additional support is given by the Natural Environment and Rural Communities Act which requires Local Authorities to have regard to nature conservation and article 10 of the Habitats Directive which stresses the importance of natural networks of linked corridors to allow movement of species between suitable habitats, and promote the expansion of biodiversity.

2) Condition: The development permitted by this planning permission shall only be carried out in accordance with the approved Flood Risk Assessment (FRA) Royal Elm Park – Land at Madejski Stadium Flood Risk Assessment and the following mitigation measures detailed within the FRA: ref 244202-ARP-00-XX-RP-CD-00001 dated 11th January 2016

- Finished floor levels are set no lower than 41m above Ordnance Datum (AOD)

The mitigation measures shall be fully implemented prior to occupation and

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subsequently in accordance with the timing / phasing arrangements embodied within the scheme, or within any other period as may subsequently be agreed, in writing, by the local planning authority.

Reason: To reduce the risk of flooding to the proposed development and future occupants.

3) Condition: No development approved by this planning permission shall take place until details of proposed trigger values for groundwater monitoring within the underlying aquifers are submitted to and approved in writing by the local planning authority. Each groundwater monitoring well will require an individual trigger value for specific determinands to be agreed. The time frame for submission of these proposed trigger values should be twelve months prior to commencement of construction.

Reasons

This proposed development will be constructed over a landfill site. The geology under the site is complex and at depth under the whole site is The Chalk (Principal Aquifer). In the region of 5,100 piles will be used for this development. We therefore need to ensure that piles do not form preferential pathways for contaminated groundwater and leachate (from the original landfill) to migrate vertically into the underlying aquifers. Details set out in item 11.2.4 of the Environmental Strategy Revision A, dated 27 June 2016 for the Proposed Redevelopment at Madejski Stadium addresses the requirement for trigger values to be set as part of the monitoring programme. Since groundwater is already impacted by landfill leachate each groundwater monitoring well will require an individual trigger value.

4) Condition: No development should take place until a monitoring plan to protect groundwater quality in the two aquifers below the site has been submitted and approved in writing by the Local Planning Authority.

a) In order to protect the aquifers under this site, during all phases of the development, groundwater monitoring should be carried out as detailed below:-

   Prior to Construction - Carry-out 3 sets of groundwater monitoring of the River Terrace Gravels and plus 2 No. Chalk boreholes at monthly intervals, the last set being at least two months prior to any excavation'.

   During Construction - Carry out monthly groundwater monitoring of 4 River Terrace Gravels boreholes close to each phase of construction from the start of excavation and continue until the site surface is resealed by reinstatement of gas resistant membrane and capping layer and placement of the ground floor slab (defined as the end of the construction phase); plus 2 No. Chalk boreholes.

   Post construction – Monthly monitoring from 4 River Terrace Gravel boreholes for 6 months (these 4 boreholes will change depending on the phasing of the development) and monthly monitoring from 2 No Chalk boreholes for a period of 12 months post completion of the ground slabs.

b) If results of monitoring of the site showing a deterioration in groundwater quality during construction (piling) or post construction (for each of the six phases of the development) this should then trigger the Action Plan in Table 7 - item 11.2.4 of the Environmental Strategy Revision A, dated 27 June 2016. In the event that a

significant offsite pollution plume is identified, then hydraulic containment will be required for the impacted aquifer and the monitoring plan should be extended.

Reasons

a) This proposed development will be constructed over a landfill site. The geology under the site is complex with aquifers within drift and solid geology. At depth under the whole site is The Chalk (Principal Aquifer). Piling is to be used for this development (approximately 5,100 piles) and we therefore need to protect all aquifers below this site from potential vertical migration of contaminated groundwater and/or leachate. Long term monitoring of this site is required following the details as set out in Chapter 11 of the Environmental Strategy Revision A for the Proposed Redevelopment at Madejski Stadium, dated 27 June 2016.

b) Results of this groundwater monitoring during construction and post construction will trigger implementation of the Action Plan. Hydraulic containment of the aquifer (that could include the pumping of groundwater wells around the site) might be required if significant pollution migrates off-site. Longer term monitoring (longer than a year) will be required should the quality of groundwater deteriorate due to a significant pollution plume.

5) Condition: Where the results of groundwater monitoring shows deterioration in water quality **above** trigger values concentrations previously agreed with the Environment Agency, the Action Plan (Table 7 of the Environmental Strategy Revision A, dated 27 June 2016) shall be implemented within one month of the results being received. The actions required to deal with deterioration in groundwater quality during all stages and phases of the development shall be implemented in accordance with the agreed scheme as set out in items 11.2.4 and 11.2.5 of the Environmental Strategy Revision A, dated 27 June 2016.

Reason: This is to ensure that no migration of contaminated groundwater or leachate impacts on groundwater quality around this development site. The proposal for the Action Plan for groundwater monitoring is detailed in Table 7 - item 11.2.4 of the Environmental Strategy Revision A, dated 27 June 2016 and this and item 11.2.5 details the actions required for amber or red status for groundwater quality. The specific determinands and their trigger concentrations for 'red' status will be agreed prior to any development on site (see separate condition for trigger values).

6) Condition: The development shall not commence until The Environment Agency are satisfied that the groundwater dewatering system installed on this site is operational and fit for purpose. The Environment Agency will need to visually inspect the groundwater dewatering system prior to any development taking place on this site. The onsite inspection of the groundwater dewatering system shall be approved in writing by the local planning authority in consultation with the Environment Agency.

Reason: In order to prevent the pollution of groundwater from this development over a landfill where installation of piles could potentially create pathways for leachate and contaminated groundwater to enter aquifers below the site.

7) Condition: Development approved by this permission shall not commence until details of the proposed piling method that a) should include dewatering the groundwater within the River Terrace Gravels b) ensure that piling should be to a maximum depth of 3m into the Lambeth Group thus avoiding the sandy lenses has been submitted to and, in consultation with the Environment Agency, approved in writing by the Planning

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Authority. The Piling (for each phase of the development) shall thereafter be undertaken in accordance with the approved details.

Reason: This proposed development will be constructed over a landfill site. The geology under the site is complex with aquifers within drift and solid geology. At depth under the whole site is The Chalk (Principal Aquifer). Piling is to be used for this development (approximately 5,100 piles through up to 13 m of waste and into the top of the Lambeth Group). The base of the Lambeth Group has sandy lenses that could act as preferential pathways for contaminated water to migrate to the top of The Chalk (Principal Aquifer). Piling could form preferential pathways for contaminated groundwater and leachate (from the original landfill) to migrate vertically into the underlying aquifers. In order to protect the aquifers below this site we need to ensure that foundation design prevents vertical migration of contaminated groundwater and/or leachate - in particular during the construction phase of this development.

8) Condition: The development hereby permitted shall not be commenced until such time as a scheme to dispose of surface water that ensures that soakaways are not constructed into contaminated land has been submitted to, and approved in writing by, the local planning authority. The scheme shall be implemented as approved.

Reason: This development is located over a landfill with a potential maximum thickness of 13 m of waste. No infiltration drainage that discharges water into the landfill should be used for any Phase of this development.

Informatives and advice

Informative - Environmental Permit

This development may require an Environmental Permit from the Environment Agency under the terms of the Environmental Permitting (England and Wales) (Amendment) (No. 2) Regulations 2016 for any proposed works or structures, in, under, over or within 8 metres of the top of the bank of designated 'main rivers'. This was formerly called a Flood Defence Consent. Some activities are also now excluded or exempt. **An environmental permit is in addition to and a separate process from obtaining planning permission.** Further details and guidance are available on the GOV.UK website: https://www.gov.uk/guidance/flood-risk-activities-environmental-permits.

Flood Risk - Safe Access and Egress – Advice to Local Planning Authority

The proposed development and/or the access route is located within the 1% annual exceedence probability (AEP) plus an appropriate allowance for climate change flood extent.

In accordance with paragraphs 101 to 104 of the National Planning Policy Framework (NPPF), you must ensure that the 'development is appropriately flood resilient and resistant, including safe access and escape routes where required...' (NPPF paragraph 103). This is on the understanding that you have concluded that the proposed development has passed the flood risk sequential test.

Within the application documents the applicant should clearly demonstrate to you that a satisfactory route of safe access and egress is achievable. It is for you to assess and determine if this is acceptable.

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We enclose a copy of our safe access and egress guidance statement to assist you with your assessment. Please note we have not assessed the proposed access and egress route.

Advice to LPA and applicant - Fluvial Flood Risk

The Flood Risk Assessment undertaken to support this application confirms that the existing ground levels are elevated above the 1% AEP flood level including an allowance for climate change. As such, any built development will not result in a loss of floodplain storage and will be resilient to flooding from a flood of that magnitude.

Advice to applicant and LPA for condition 1

It should be noted that with regard to an eradication programme for Himalayan balsam, the developer with need to co-operate with Green Park who own and manage the left bank of the Foudry Brook in order for it to be effective. Additionally, floating pennywort (*Hydrocotyle ranunculoides*), a highly invasive non-native species, is found from time to time on this stretch of the Foudry Brook. Various developers along the watercourse, including Green Park have been working co-operatively with Reading BC and the Environment Agency to try to eradicate it, and it would be expected that the applicants would commit to being an active partner in this on-going long-term management.

Advice to applicant for condition 4

It should be noted that there are groundwater divides within the River Terrace Gravels under this site and this will influence the choice of boreholes used for the monitoring schedule for each phase of this development.

Advice to applicant and local planning authority for condition 5

This development will be over six phases and the groundwater monitoring will be carried out using different boreholes for each phase. In the event that deterioration is measured in groundwater quality then a meeting will be required between the developer and/or their agents and the Environment Agency to review and agree foundation design and construction methods before commencement of any further phases of the development.

Advice to applicant for condition 7

Prevention measures agreed for this development are a) use of appropriate piling methods that ensure that no migration pathways are left after installation, **b)** that any contaminated groundwater within the River Terrace Gravels and/or leachate is removed prior to and during the piling installation process and **c)** Continuous Flight Auger piling should be to a maximum depth of 3m into the Lambeth Group (thus avoiding the sandy lenses). The Environmental Strategy Revision A, dated 27 June 2016 addresses these issues in chapters 7, 10 and 11 and here it is proposed that a continuous flight auger piling technique will be adopted for this development; that leachate sumps will be pumped and groundwater dewatered prior to and during piling.

Advice to local planning authority and applicant - Landfill Gas

In terms of this planning application the assessment of risk to the proposed development from landfill gas is not within our remit and the local planning authority must make a decision about this. However, we do have a regulatory role under the

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Environmental Permitting (England and Wales) Regulations 2010. We do this via an extant environmental permit which regulates the environmental impact of the site.

We have provided the following advice for the local planning authority and the applicant. The first set of advice is about the landfill at this site and the potential hazards. This is from our knowledge of the site and is for the benefit of the local planning authority and applicant. The second set of advice is about the environmental permit and gives advice to the applicant about maintaining compliance with the requirements of the permit.

1) Advice to local planning authority and applicant – landfill gas

Reading FC landfill was a landfill for re-deposited non-hazardous waste and is known to be producing landfill gas and leachate. Landfill gas consists of methane and carbon dioxide which is produced as the waste in the landfill degrades. Methane can present a risk of fire and explosion. Carbon dioxide can present a risk of asphyxiation or suffocation. The trace constituents of landfill gas can be toxic and can give rise to long and short term health risks as well as odour nuisance.

The risks associated with landfill gas will depend on the controls in place to prevent uncontrolled release of landfill gas from the landfill site. Older landfill sites may have poorer controls in place and the level of risk may be higher or uncertain due to a lack of historical records of waste inputs or control measures.

Under the conditions of the Environmental Permit for the landfill, the operator is required to monitor for sub-surface migration of landfill gas from the site. However, there are gaps in the external gas monitoring data for this site. Data from recently installed in-waste gas boreholes shows that there is evidence of landfill gas within the waste that could affect the proposed development. The site monitoring data is available on our public register.

You should be aware of the potential risk to the development from landfill gas, both during any construction phase and following completion, and you should carry out a risk assessment to ensure that the potential risk is adequately addressed. You should be aware that changes in leachate/groundwater level within the waste may affect landfill gas production and pathways for gas movement. The local authority's Environmental Health and Building Control departments would wish to ensure that any threats from landfill gas have been adequately addressed in the proposed development. This may include building construction techniques that minimise the possibility of landfill gas entering any enclosed structures on the site to be incorporated into the development.

The following publications provide further advice on the risks from landfill gas and ways of managing these:

1. Waste Management Paper No 27
2. Environment Agency LFTGN03 'Guidance on the Management of Landfill Gas'
3. Building Research Establishment guidance – BR 414 'Protective Measures for Housing on Gas-contaminated Land' 2001
4. Building Research Establishment guidance – BR 212 'Construction of new buildings on gas-contaminated land' 1991
5. CIRIA Guidance – C665 'Assessing risks posed by hazardous ground gases to buildings' 2007.

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2) Advice to local planning authority and applicant – Environmental Permit.

Reading FC landfill is currently regulated via an environmental permit number T/W/54/12/4/436 (other references EAWML 86039, EPR/XP3199EZ). Any proposed development must not compromise the ability of the current or future permit holder to comply with the conditions of the permit and ultimately demonstrate that the landfill can progress to permit surrender. This would *include* ensuring:

- That the site is operated to prevent or minimise pollution or harm to human health
- The inspection, maintenance and integrity of the landfill infrastructure, including the cap.
- Inspection/maintenance of the restoration profile.
- Landfill gas management, including
  - Monitoring fugitive emissions
  - Maintaining gas management infrastructure, including replacement
  - In-waste gas monitoring
- Maintenance and monitoring of leachate infrastructure
- Maintenance and monitoring of groundwater infrastructure
- Surface water management and maintaining the quality of run off
- Access to the site for emergency works, installation of additional or replacement infrastructure etc.
- Assessing the settlement behaviour of the wastes (e.g. obtaining topographic surveys)
- Monitoring to provide evidence that the waste is 'stable' for a surrender application.
- Site security

Should development be permitted on the site and construction commences before permit surrender, the landfill operator may need to apply to vary the environmental permit to our agreement to reflect the design and management of the site. Where any development impinges on the landfill infrastructure, including the landfill cap, this must be carried out in accordance with the permit and with the agreement of the Environment Agency.

If you have any questions please don't hesitate to contact me.

Yours sincerely

Ms Michelle Kidd
Planning Advisor

Direct dial 02030259712
Direct e-mail planning-wallingford@environment-agency.gov.uk

cc Barton Willmore LLP

End

4) Design Review Panel

Summary

This is an ambitious scheme both in commercial and design terms on a challenging site. It has the potential to turn what is already a destination for football fans and convention centre users into a much more significant attraction and a desirable residential complex. Further examination is needed of the quality and quantity of connections, particularly for pedestrians and the sense of arrival at the site for all modes of transport.

We commend the proposals for the main square, public transport hub and park. A more sophisticated solution is needed for the interface between the square and park. We urge that the bank be treated as an asset to the scheme rather than a constraint or buffer. Green Park is an impressive neighbour and the more this scheme can integrate with it and complement it the better. The convention centre building could be a fabulous addition to this ensemble with a beautiful sculptural form that could be a symbol of Reading provided that its design is not compromised in the detailing or through the procurement.

This is an extraordinary site but the current residential proposals are failing to recognise the potential. The principle of residential use on this site is sound but we would encourage a more visionary and dynamic approach to the creation of this new neighbourhood.

Our comments are as follows:

Background

This is a proposal for a mixed use development adjacent to the Madejski Stadium in Reading including a convention centre, hotel, retail and leisure facilities, up to 430 homes, a multistorey car park, public transport hub and public spaces. The site is an elevated plateau in the south of Reading surrounded almost on three sides by the Green Park business park and with large logistics and retail sheds on the other sides. It is currently used for surface car parking and Reading Football Club's training facilities. It is an area identified for growth in the local plan. A hybrid planning application has been submitted with an outline application for the whole development with all matters reserved except access and a detailed application for the convention centre, hotel and retail building, multi storey car park, 'block 7' a residential and retail building and the public space and transport interchange.

Connectivity and arrival

This is a challenging site in terms of connectivity and it is helpful that the football stadium and existing convention business has been there for some time to build up experience as to how this might be managed. The position of the site, some way from the centre of Reading and close to the motorway network lends itself to arrival by car but clearly it would be impractical and undesirable for all visitors to arrive by car, particularly at peak match-days. The proposals to maximise bus and park-and-ride modes are commendable and seem practical.

Opportunities for direct cycle and pedestrian access are limited but should nevertheless be encouraged as each one reduces car travel or eases congested public transport. The quality of pedestrian and cycle connections into the site needs to be carefully considered particularly the two routes that are shared with vehicle traffic. The quantity of such routes particularly on the eastern Green Park side of the site was disappointing. An opportunity seems to be_being missed for greater integration with Green Park and maximising access to facilities in either direction. The advent of Green Park station seems to create an opportunity for further public transport access although the distance and the difficulty of using trains for match-day transport (as demonstrated at Coventry) may limit this.

We are uncertain from the material provided as to how arrival at the site via the two road routes (by whatever mode) will be experienced. The site's neighbours do not help to enhance this experience but the northern route seems to present visitors with a view of the back of the convention centre. Further attention to the articulation of the convention centre as suggested below may help with this, but we would also urge consideration of how the sense of arrival to the site might be enhanced with out resorting to trite 'gateway' tropes.

Public realm

We applaud the ambition shown in the provision and design of public spaces in this proposal. The main square provides a great space for crowds on match days and contrasts well with many football stadia which are hemmed in with car parking. It is important as the scheme develops that this simple clear form is not compromised by elements of parking creeping back in or by other clutter. However, the disadvantage of a large open space is that when not filled with people it can appear vast and wind-swept. It is worth considering how the space could be broken up at the edge to provide smaller more sheltered spaces and what the opportunities are for formal and informal seating for those that need it.

The public transport hub also shows a commendable simplicity. Conventional bus stations are rarely pretty because of the necessary clutter of shelters. This scheme has avoided those which may create some discomfort when the weather is poor but on balance provides a more acceptable and legible experience. As with the main square vigilance is needed against the reintroduction of clutter. We would urge that the design approach around the public right of way (stepped and ramped) linking through to Green Park is reviewed. This westerly-aspect slope has great potential to be designed to feel part of the public transport interchange. The varied topography and resultant views out of, and into, the site could add much to the perception of quality and connectivity whilst adding an additional area of shared public realm.

The proposed park provides a great setting and greatly improves the desirability of what otherwise might have been are rather isolated high-density development. The park provides an excellent amenity for other visitors and staff on the site which complements the hard surface of the square. We are concerned to hear that Heras fencing is being proposed as a solution for those occasions where there may be a need to protect the park from football crowds. At this stage there is an opportunity to design in a solution to that potential problem rather than use an ugly temporary arrangement. Traditional parks have grand entrances that are welcoming most of the time while capable of being locked shut. A contemporary version of that approach, or something subtler and innovative could give the park the flexibility to be private on exceptional occasions. A designed-in solution might be easier to implement at short notice allowing the management of the development to assess whether there really is going to be a problem on match days.

A further potential area of public realm is the bank around the southwestern parts of the site. We understand that a path was originally designed into this wooded area but was taken out on police advice. We think this should be challenged. The bank has the potential to create an excellent amenity for residents and complements the trails that already exist in Green Park helping to integrate this development with that employment area. Combined with a more open approach to the design of the residential area it could be a well-used amenity space which contrasts with the formality of the park and further enhances the marketability of the new homes. The alternative is that the residential area is surrounded by a utilitarian service road and woodland buffer which is separated from the residential area and therefore means that anyone with anti-social intent will be hidden and undisturbed.

Convention centre & hotel

We were unable, within the time available, to carry out a thorough review of the convention centre and hotel building. We had our misgivings about the viability of both the convention centre and ice-rink businesses but are reassured by the experience and market analysis that has been undertaken by the Reading FC and the current convention centre operators. The proposal to operate the ice-rink on a seasonal basis is a good response to its marginal viability and avoids the issues that have arisen elsewhere in trying to use ice-rink spaces for other purposes while the refrigeration is still operating.

We applaud the ingenuity of the architecture in ensuring that the different elements of this building can be serviced from a central point. The architectural treatment of the building is based on the precedent of More London and a similar building in Seoul. This approach has the potential to produce a stunning building on this site and has the practical benefit of masking a variety of 'lumpy' forms which result from its mix of uses. It is essential for this approach to work that the curvaceous form of the façade is not compromised and particularly attention needs to be paid to the detailing of the edges, roof and ground floor. Mundane aspects of the design such as servicing, cleaning and signage should be carefully considered so that the overall concept is not weakened at a more detailed stage by the insertion of clutter. The procurement process for this building will be critical to its success.

Residential area

Most of the residential area is not part of the detailed planning application and there is the need and opportunity to do more work on its design. There should be greater consideration of what it is like to live here – how residents will access local services (health, schools, leisure, shops) as well as how they will feel part of a community, how the wooded bank of the escarpment can provide valuable amenity space, how the residents will feel comfortable at the times when their local population soars to 40,000 and when it drops down to a few hundred. Affordable housing should be a part of the on-site proposal to support the creation of an inclusive and diverse community. The quality of individual housing units should be higher than that indicated by Block 7 which includes several north-facing single aspect units.

We suggest that a design code is developed for the residential area to give the local planning authority reassurance about how the design might evolve.

At present the residential blocks are presented as of consistent design and we wonder whether allowing variety in the architectural approaches within the same envelope might provide more character to the development. The approach of arranging the blocks as 'fins' allows for sunlight and views to be optimised and we understand the work of testing this is continuing. While the current illustration appears to provide good view opportunities for residents, consideration should be given to selective thinning of slope woodland to provide view corridors aligned with the public realm access corridors between the blocks. In its wider geographic setting the residential component of the site sits within a unique hill-top promontory, therefore selective visual connections could add greatly to the design concept.

Currently there is some variation in depth and height of blocks, although their elevations are designed to be consistent. Further testing should consider how the development will look in views from Green Park, where it will form a new skyline, and from other points around the site in long and close views. Internal views are also important, in particular looking along the length of the park, where the arrangement of blocks will terminate the view and enclose the space. The current layout, with angled blocks, doesn't respond to the prominence of this location and raises a question: Should the park be an enclosed space or one that provides views out?

There is further work to be done to explore how the spaces between the blocks work. Some are shown as terminated with three-storey linking blocks. These could contribute to the housing mix by providing town-houses and might lend a greater sense of ownership to the park. The courtyards that they create may provide some shared amenity space with greater privacy for residents but need to be tested for daylight and sunlight. The spaces between the blocks can also provide a linking function but some thought is needed as to how the heights are dealt with on the service road side. The perimeter of the residential area should not be written off as simply a sterile service road and landscape buffer.

These outstanding residential elements could benefit from a further review at a later date.

Sustainability

We understand that ground conditions on this site make a single heat and power unit difficult to implement. With regulatory pressures for energy efficiency removed there seems little incentive for ambition in this regard. However, we feel that the development will be missing a marketing opportunity if it does not maximise its green credentials. Given the proximity to Green Park business park, and the green-space provision on the site and opportunities for active leisure pursuits, there is a narrative to be generated about a sustainable life-style which could make this a very attractive location

5) Wokingham Borough Council Transport

Wokingham Borough Council (WBC) have been consulted on application 161266 [RBC ref: 160199] which is for the following; Outline application for residential development (Blocks 1-6 only) to provide up to 430 residential units, comprising predominantly 1 and 2 bedroom apartments (Use Class C3) along with associated landscaping and car parking. And application for residential and mixed use development comprising: 203 residential units, convention centre and ice rink, 246 bedroom hotel and up to 102 serviced apartments, decked car parking within convention centre, flexible ancillary retail space, multi storey car park, public open space, associated access, landscaping, cycle parking, transport interchange and related infrastructure/engineering works, ancillary facilities, access and demolition of existing indoor training facility and enhancement of existing RFC Garden of Remembrance.

It is acknowledged that Reading Borough Council may have agreed various approaches through the scoping process of the application. However due to deficiencies within the Transport Assessment WBC are not able to determine the potential impacts upon our Borough and also question if RBC are able to. As it stands WBC would not accept this transport assessment due to the following:-

1. Lack of Saturday assessment
2. Bus capacity issues
3. SATURN cordon model not big enough
4. VISSUM model mention but missing from TA
5. Additional information on model inputs are required
6. Additional information on TRIC's sites and assumptions required. Capping the car trips to office by the number of parking spaces is not acceptable.
7. The assumptions on internal trips need to be reassessed as a trip from the hotel to convention centre cannot be treated only as an internal trip. The original trip to the hotel is an external trip and would need to be included.
8. Mode share information needs to be submitted
9. Available bus capacity should be used to ascertain impact on buses.
10. Car occupancy for the stadium would need to remain at 2.3 to ensure a worst case scenario.
11. Parking survey area was not big enough to correctly assess the level of parking off site for a stadium.
12. A sensitivity test for 2026 would need to be carried out.
13. Due to the size of the development WBC would have expected a bigger impact on the road network. This needs to be revisited.

Therefore until the above points are rectified, WBC would recommend that RBC refuse this application. WBC is willing to meet with PBA, Highways England and RBC to discuss these points.

Executive Summary

Whilst the proposed package of transport measures is welcomed, to achieve the level of people travelling by bus there will need to be a minimum of 300 buses based on a maximum capacity of 70 passengers per bus. It is understood however that the capacity of a Greenwave Bus (single deck bus) is much less than 70 passengers.

There are currently around 1,800 spaces on site, with the proposed development; there is no loss of parking just a redistribution of the number around different land uses.

It is unfortunate that WBC together with Highways England have not been involved at the pre application stage due to the potential impact on Junction 11 and the highway network in Wokingham.

The assessment has been carried out on opening year, should not a design year been included?

The journey time differences do appear low, especially differences caused by the proposed development.

1. Introduction

The scope of the TA appears to be OK, though would have expected evidence to support the selection of the peak hours. In addition, due to sports matches and possible events taking place, why was a Saturday assessment not carried out? WBC would recommend that this assessment be carried out.

2. Royal Elm Park in Context

With regard to the Millennium Hotel and the Royal Berkshire Conference Centre, is there any information on the number of events and the number of attendees?

Is there information on the number of users of the buses on match days?

3. Chapter 3 Royal Elm Park Proposals

In para 3.4.7 there is a total of 884 spaces for residents, should this not be 830 as in table 3.2? In addition, this parking provision seems low. There appears to be no mention of management to ensure that there is no overspill parking.

In addition, due to the overspill parking on match days and the use of cycle/pedestrian routes such as over junction 11 these routes are full with pedestrians and cycles cannot use these routes to cycle due to the volume of people. Therefore there needs to be either some management of these routes or introduction of a new cycle route.

Whilst it is welcomed that there would be a shuttle bus service between the conference centre and Reading Station, has any assessment been carried out on the likely number of buses that would be required as the maximum capacity would be around 70 for a double decker bus?

The proposed parking strategy is welcomed, it is unfortunate that it appears only to deal with hotels, conference centre, ice rink and the stadium, it should have also included the residential areas to control overspill residential parking. Currently on match days there is an increased level of informal parking within the surrounding areas including residential areas. With the removal of parking from the centre, this demand for parking is likely to increase. Many people currently parking in Mitford development (Tabby Drive) and walk over the M4 Junction 11 pedestrian / cycle route. To this end the parking strategy should also have dealt with this overspill parking within at least a 30 minute walk of the stadium.

4. Highway Operations and Modelling

Due to the nature of this development and its location, it is welcomed that a SATURN model is being used to assess the traffic impacts of this development. It is an acceptable methodology to cordon out a more relevant section of the larger SATURN model to better

assess the impacts of the development. However, WBC do not accept the cordon model used for this assessment and would have recommended a wider cordon to include alternative routes to be made available. For a wider cordon, further traffic counts would need to be undertaken.

The A33 Cordon Model was agreed to be used to assess the MRT proposals for this area by the Berkshire Local Transport Board as part of the business case for the MRT proposal. This does not imply that it would be suitable for assessing the impacts of this development. The TA states that the cordoned model was updated with network changes, there is no mention in the TA what these changes were. These would need to be supplied.

Whilst the methodology for estimating the cordoned matrix is acceptable, WBC would have preferred the Manual Classified Counts to be undertaken at the same time and the use of ATC data collected at the same time and place over at least a 2 week period (1 week to cover those of the manual classified counts). This would ensure any data trend was identified.

With respect to the Automatic Traffic Counts, they appear to be correct selections for this cordon. However no information from these sites was included in the TA and did the information show any trends?

With reference to the journey time information, WBC would have expected that the routes on B3031 would travel the length of the road and that there would have been some east west journey time routes.

Was there any delay information extracted from the model.

The cordoned model has been validated to Web TAG criteria which are welcomed. However, WBC would have expected that some explanation of the larger changes between modelled and observed would have been included in the TA to show some understanding of the operation of the model.

It appears that a VISSIM model has been developed but there is little or no information regarding this model in this section. This should have been included.

Committed development and all the associated highway works would need to be included in the forecast year Do-Minimum matrices and network. Has WBC agreed to the developments and highway changes included?

What are the sources of the trip rates for the committed developments? Whilst it is an acceptable methodology to use adjusted growth factors for TEMPRO, WBC would have expected to see the before figures as well as the adjusted figures. WBC would also have expected an assessment of ATC data over the past 5 years to assess whether or not there has been growth in traffic.

When comparing Table 4-6 and Table 4.7 all statistics bar one increase, Transient queues reduce. WBC would have expected an explanation for this.

In section 4.63 this is the first mention of network delays.

5. Royal Elm Park Trip Generation

Residential

Clarification is required on the number of proposed residential units.

It is an acceptable methodology to use a more representative site to carry out a TRICS survey to use for this assessment. However a full description of the site, its location, development size and the results of the survey would need to have been included in the TA together with a comparison of trip rates from TRICS to ensure that the worst case scenario is being used. This would need to be provided before WBC could accept these rates. The use of person trips is acceptable.

The use of National Travel Survey and Census data to provide a breakdown of trip purposes for residential units is acceptable.

With the assumption included here, has any assessment been carried out to ensure that the impacts of adopting these assumptions would not have an impact on the results? In addition, shift workers should be included in the arrivals from the TRICS survey.

Tables 6.3 and 6.4 are based on the trip rates calculated from the Kennet Island survey and 630 dwellings.

For weekday evening assessments, it is acceptable that this would need to be carried out to assess the impact. These have been derived from TRIC sites contained in the Appendices. However no assessment has been carried out to see whether or not the sites used are representative of this site. This would need to be done before these trip rates could be acceptable. Why was the survey of Kennet Island not used?

Ice Rink

In the TA it states that the ice rink would be a National Hockey League standard ice rink. Is it proposed that ice hockey matches would be played here? If so, the assessment would need to be re-done to include these matches. Clarification is required on this matter.

It is acceptable that due to no data available to calculate the AM peak hour trip rate, to inverse the PM peak rates. All supporting evidence regarding the sites selected will need to be assessed to ensure that they are representative and included in this section before the trip rates can be accepted.

Hotels

Having assessed the selected trip rates only one of the sites selected (Holiday Inn in Norwich 119 rooms) approaches the size of the proposed hotel, the rest are small hotel. The existing Millennium Hotel is of similar size and WBC would have expected it to be surveyed. Why was this not the case?

Serviced Apartments

The assumption of using the hotel trip rates to calculate the trips for this land use is acceptable.

Convention Centre

Whilst the use of first principles is an acceptable methodology, all information and calculations used have to be provided before these can be deemed acceptable.

The assumption of staggered arrival times is acceptable. However, this is not so for the departures, as for most venues, people tend to leave within the hour after finishing.

The 5% assumption for taxi use is low and WBC would have expected a higher percentage.

For the weekday evening, an assessment would need to be carried out as the only control would be through a planning condition or through the license system.

Office

It is not acceptable to use the number of parking spaces available to cap the trip rates for office space. The assessment would need to be redone for office. There are no person trip rates for office. This is missing from this assessment.

6. Royal Elm Park Distribution

In the event of the conference centre, attendees may be staying at the hotel. However, these cannot be assessed as internal trips as they still need to get to the development. Therefore they would be expected as trips in to the hotel.

Whilst it is unclear how the TA has treated home to school trips, the normal methodology is that as the school is outside the proposed development, these trips would need to be included as departures and no discount should be applied. Therefore it is WBC's opinion that the section on residential internalised trips in the TA is misleading and should have been removed.

With reference to secondary education, WBC believes that having only two secondary schools included in the assessment may underestimate the impact of school trips on the network and this would need to be reassessed.

The use of 2011 census data to calculate the distribution of employment trips is an acceptable methodology. However, an assessment of the Kennet Island distribution would need to be carried out to ensure that it would representative of this site.

With reference to the hotel and conference centre distributions, it is very unclear on the process used and clarification of the methodology would need to be provided before it could be deemed acceptable.

Green Park trips would need to be assessed to ensure that they are representative for this site before they can be used as a proxy, this has not been done. This will need to be carried out to ensure that the correct distribution is used. Is this distribution all modes?

7. Royal Elm Park Trip Mode Share

There are no tables showing the number of trips per mode per land use type for residential, and hotel. Only the convention centre has a table showing trips per mode. However, no methodology has been included in this section on how these were calculated. The same can be said of the residential and hotel trips. This will need to be submitted for assessment before the mode share can be deemed acceptable. It is difficult to assess tables 8.6 and 8.7 until a full explanation of the methodology used to get mode share is submitted.

8. Public Transport Trips

It is an acceptable assumption that those using the train would use the bus to reach the station, this would give the worst case scenario for bus use. However as explained above there is no assessment in the previous section on how the total trips per mode were calculated.

The assessment of the number of train passengers using the bus to reach the station should not be calculated as how many new buses are required, but on the available capacity of buses on the route. If the buses are at capacity an additional 1 passenger could imply that an additional service is required.

For the convention, there is no evidence supporting 10% will travel by coach. This will need to be provided before it is deemed acceptable. With respect to bus capacity, 80 passengers capacity is probably too high and a figure of 70 passengers may be more acceptable. WBC believes that the number of coaches and buses has been underestimated.

The requirement for additional buses is not only based on the potential number of passengers but on the available capacity.

9. Net Trip Changes

Due to the comments provided on previous sections, no comments can be provided at this stage until further information is provided as set out above. Further comments may be forthcoming

10. Impact on Stadium Expansion

While it is welcome that a survey of supporters was undertaken to ascertain travel mode to the stadium, WBC would have expected to see all the results of the survey including bus, coach, train and car. This would enable a more accurate assessment of the impact of reducing car parking at the stadium. Whilst looking at the aspiration targets walk, motor cycle and taxi remains the same percentage. It would have been expected that these would increase as well.

With reference to the car occupancy, there is no evidence to support the assumption of the increase in car occupancy to 3 people per car. WBC would prefer that the surveyed car occupancy of 2.3 people per car be used for this assessment to ensure the worst case scenario. This would therefore reduce the number of supporters that would be able to use the Foster Wheeler car park.

This use of car occupancy rate of 2.3 would result in 3,900 cars. If the rate of 3 people per car were used, this would result in fewer cars than the current stadium.

Is there any evidence to support the assumed level of parking at Mereoak Park and Ride? If so this will need to be provided before further comments can be made.

It is acceptable to assume that Green Park Station would not be operational when the expanded stadium becomes operational. However strategies would need to be in place to ensure that supporters would be able to take advantage of Green park Station.

It is welcome that on street parking surveys were carried out. However WBC has several concerns with the survey. The first is that the survey did not include any streets to the west of B3031, no surveys were carried out during an evening match and the walk time extent of the surveys was not sufficient (unless there is evidence to support the maximum walk time). These would give a better representation of the parking associated with a match.

As stated earlier the full mode share of supporters is required to ensure that the surveyed number of car users is shown as well as the future mode share so that the impact of off-site parking can be properly ascertained

11. Impact Appraisal

The scenario tests are acceptable. With reference to the full conference case has it been assumed that all attendees would leave during the pm peak hour? Due to the size of the development, WBC would have also liked to see a sensitivity assessment of say 2026 to ensure all development completed and occupied.

Looking at the junctions selected for reporting, these are not sufficient. There are no junctions on the B3031 included in this report. As this is a parallel route to the A33, this development could have an impact on the junctions and should have been reported.

On comparing the average delay per vehicle with between the reference case and scenarios 1 and 2 for the AM peak there is very little or no change in the average delay per vehicle at Bennet Road Gyratory. This does appear strange for a development of this size. The same can be said of South Oak Way, Imperial Way, A33 Basingstoke Road, and M4 Junction 11.

Looking at the PM peak hour, clarification is required on the large average delay per vehicle on Longwater Avenue and on South Oak Way in all scenarios. Similarly to the AM peak period there are little or no changes in all scenarios, though on the sound bound on slip from Imperial Way, the average delay has almost tripled when it merges with the A33 (average delay has increased on this link).

It may be true that the changes to traffic conditions are caused by the development included in the Reference case, however a fuller explanation of the results is required.

12. Event Management Plan

The results of the catchment analysis would need to be provided to enable WBC to understand where the fans would be travelling from. It is welcomed that some work has been carried out to investigate the likely requirement for new coaches. However, based on the anticipated mode share set out in Table 13-2, 11,500 spectators would use scheduled buses, shuttle buses and buses from park and Ride and the use of the same vehicles on most routes, Table 13.1 could be an underestimation of the number of vehicles required. If the stadium increases to 36,900 seats the number of spectators using buses would increase to 60% of all spectators around 22,000. In that case WBC would assume that many more buses would be required.

13. Provisional Construction Method Statement

While in principle the construction method statement is acceptable, WBC would recommend that the monitoring of HGV journeys is carried out to ensure that these vehicles using the designated routes.

If these are included in the Provisional Statement then this statement would then need to be subject to a planning condition if Reading deems to approve this application.