Preliminary environmental information report

Addendum to Volume 9: Barn Elms

Regulations 2 and 10 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009
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1 Introduction

1.1.1 The Preliminary Environmental Information Report (PEIR)\(^1\) relating to the Thames Tunnel project was subject to phase two consultation from 4 November 2011 to 10 February 2012. The PEIR included a preliminary assessment of the likely significant effects of the proposed development at Barn Elms, presented in Volume 9 of the PEIR.

1.1.2 Potential changes to the proposed development at Barn Elms are under consideration in response to phase two consultation feedback. These are the subject of targeted consultation and comprise:

a. The permanent access road to be routed to the north and east of the site via Queen Elizabeth Walk.

b. The temporary construction access road to also be routed to the north and east of the site via Queen Elizabeth Walk.

c. The existing Barn Elms Schools Sports Centre changing room and track and field facilities to be demolished to facilitate the routing of the access road. It is anticipated that alternative facilities would be provided within the Barn Elms Schools Sports Centre grounds during site setup.

1.1.3 Plans showing the potential changes are provided in Appendix A.

1.1.4 This document forms an Addendum to Volume 9 of the PEIR. The purpose of this Addendum is to describe the potential changes at this site which are being considered in response to comments received during phase two consultation and to identify whether these have the potential to give rise to likely significant environmental effects not identified in the assessment presented at phase two consultation or which are materially different. This document does not repeat information from the earlier assessment where this is unchanged. This document should be read in conjunction with PEIR Volume 9 - Barn Elms.

1.1.5 Section 2 of this document describes the potential changes to the proposed development at Barn Elms. Section 3 deals with those topics where these changes are not anticipated to result in likely significant environmental effects not already identified or materially different from those identified in the PEIR at phase two consultation. Section 4 contains an update to the preliminary assessment for environmental topics where the potential changes to the proposed development have the potential to generate likely significant environmental effects which were not previously identified in the PEIR or which are materially different to those identified in the PEIR published at phase two consultation.

1.1.6 Once targeted consultation has been completed for this site and feedback considered, the proposed application for a Development Consent Order for the project will be published in accordance with Section 48 of the Planning Act 2008. The information published at that stage will include an

Environmental Information Report setting out findings from the Environmental Impact Assessment (EIA). That document will not comprise an Environmental Statement for the purposes of the EIA Regulations, and there is no requirement to provide an Environmental Statement as part of the Section 48 publicity material. The environmental information that is voluntarily to be published at that stage is intended to assist in a fuller understanding of the nature and location of the proposed development which Thames Water intends to seek development consent for in due course, subject to considering responses received to the Section 48 publicity. A full Environmental Statement will be submitted with the Development Consent Order application.
2 Potential changes to the proposed development

2.1 Introduction

2.1.1 This section identifies the potential changes to the proposed development at Barn Elms during operation and construction which have been triggered by feedback from phase two consultation. Plans showing the potential changes are presented in Appendix A. Plans showing the scheme presented at phase two consultation are in Appendix B. These include the unchanged construction phase plans which provide context to the potential changes at these sites. The operational phase and the construction phase are addressed in turn.

2.2 Operation

2.2.1 The proposed development at Barn Elms would remain as presented in the PEIR, with the exception of the operational access. This would be via a new permanent access road on the same alignment as the construction access route along the northern and eastern perimeters of the Barn Elms Schools Sports Centre. A more detailed description of the route is contained within Section 2.3 of this Addendum. Vehicles would access along Queen Elizabeth Walk before passing through a narrow section of private road which currently serves the playing fields.

2.2.2 At phase two consultation, the operational access was presented as via a new permanent access road between the existing Barn Elms Boat House access road, located to the north of the site, and Queen Elizabeth Walk. The operational access route followed a different alignment to the proposed construction access road presented at phase two and it would not have required the demolition of any existing Barn Elms School Sports Centre facilities.

2.2.3 The width of the new route would be unchanged from the 3m presented in the PEIR.

2.3 Construction

2.3.1 The construction of the proposed development at Barn Elms would remain as presented in the PEIR, including measures within the Code of Construction Practice (CoCP), with the exception of the following potential changes.

2.3.2 The construction site area, as defined by the ‘limit of land to be acquired or used’ would be approximately 3ha, compared to approximately 2.5ha proposed at phase two consultation.

2.3.3 Construction access to the site would comprise the formation of a new access road across the northern and eastern parts of the Barn Elms Schools Sports Centre. Vehicles would access the site along Queen...
Elizabeth Walk before passing through a section of private road which currently serves the playing fields. Construction vehicles would then transfer to a dedicated and segregated access route to enable transfer to the construction site.

2.3.4 The proposed alignment of the access route would require the demolition of the existing changing room facility and the relocation of some existing track and field facilities. Alternative changing room facilities would be provided within the Barn Elms Schools Sports Centre grounds during site setup. The exact location of these are to be agreed with the sports centre owners, the London Borough of Wandsworth, should the potential changes proceed. It is considered likely that they would be re-provided in close proximity to the existing facilities.

2.3.5 The use of Queen Elizabeth Walk would require temporarily moving the stop line and repositioning a traffic light column at the junction of Queen Elizabeth Walk and Rocks Lane, with some associated parking suspension on Rock Lane.

2.3.6 At phase two the construction access to the site was presented as via a temporary access road across the southern parts of Barn Elms Schools Sports Centre and the Barn Elms Playing Fields. Access to the site was via the widening of an existing vehicle crossover located off Rocks Lane. The use of this access required the relocation of an existing bus stop and removal of a section of on-street parking on Rocks Lane opposite the site access to provide adequate carriageway width to allow construction vehicles to turn into and out of the site.

2.3.7 The construction route proposed at phase two proposed the demolition of a sports pavilion facility located along the southern perimeter of the Barn Elms Playing Fields. This facility would be unaffected by the revised access route.

2.3.8 The proposed tree removal and pruning of the trees adjacent to the vehicle cross-over off Rocks Lane, required for the construction access, would not be necessary as part of the revised access proposals. Two trees would still require removal and others would require pruning in advance of the works, albeit in different locations and of less mature tree specimens.

2.3.9 The width of the revised construction route would be unchanged from the 5m presented in the *PEIR* although the exact route remains to be finalised.

2.3.10 As reported in the *PEIR*, construction vehicle access between the Transport for London Road Network (TLRN) (Lower Richmond Road) and the site would still be from the south via Rocks Lane.

2.3.11 For the purposes of this report, as stated in the *PEIR*, one vehicle movement is defined as a single vehicle accessing or egressing the site. Total lorry movements over the entire construction period would increase from approximately 2900 to 3300. This increase is associated with the demolition and construction of the changing room and track and field facilities. The peak daily vehicle movements, averaged over a one month period, would be approximately 22 movements a day (compared to 20 reported in the *PEIR*). This lorry peak would be during the demolition of
the existing changing room facility and the formation of the access road, a period of approximately two months. This level of vehicle movements would not be for the full duration of the construction period.

2.3.12 Upon completion of the works the width of the construction access road would be reduced from 5m to 3m and the area not required for operational access would be reinstated.
3 Topics with effects unchanged from phase two

3.1 Introduction
3.1.1 This section presents an update to the PEIR as it relates to Barn Elms, taking account of the potential changes to the proposed development, which are being considered in response to comments made during phase two consultation. It addresses those topics where the potential changes under consideration are not likely to give rise to likely significant effects that are materially different compared to those presented in the PEIR published at phase two consultation.

3.2 Ecology – aquatic
3.2.1 The phase two assessment for aquatic ecology can be found in Section 5 of Volume 9 of the PEIR.
3.2.2 No effects were identified on aquatic ecology during the construction phase in the PEIR. This conclusion would not be altered by the potential change to the alignment of the construction access road because the revised access alignment does not affect the Beverley Brook and River Thames.
3.2.3 The beneficial effects on all aquatic ecology receptors during operation would not change.
3.2.4 It is therefore considered that the potential changes to the proposed development would not result in material changes to the phase two aquatic ecology assessment during construction or operation.

3.3 Land quality
3.3.1 The phase two assessment for land quality can be found in Section 8 of Volume 9 of the PEIR.
3.3.2 Potential changes to the proposed development would not lead to the inclusion of any known contaminative land uses within the site boundary, as indicated by the baseline described within a 250m study area in the PEIR. Similarly the change to the alignment of the construction and permanent access road would not introduce any additional potential receptors that could be affected by the proposed development.
3.3.3 It is therefore considered that the potential changes to the proposed development would not result in material changes to the phase two land quality assessment during construction or operation.

3.4 Water resources – groundwater
3.4.1 The phase two assessment for groundwater can be found in Section 13 of Volume 9 of the PEIR.
3.4.2 There are no proposed changes to the development of relevance to groundwater because the below ground structures which could affect groundwater flows, remain as presented in the PEIR. The negligible effects on groundwater predicted in the PEIR remain the same.

3.4.3 It is therefore considered that the potential changes to the proposed development would not result in material changes to the phase two groundwater assessment during construction or operation.

3.5 Water resources – surface water

3.5.1 The phase two assessment for surface water can be found in Section 14 of Volume 9 of the PEIR.

3.5.2 There are no proposed changes to the development of relevance to surface water on the basis that the primary construction site location and activities remain the same.

3.5.3 The new alignment of the construction access road is in closer proximity to the London Wetlands Centre SSSI (approximately 5m to the north of the access road). However it is considered that with the proposed drainage management the pollution pathways can be managed sufficiently to reduce the pollution risk to negligible.

3.5.4 In terms of the operational assessment, the beneficial effects on water quality would not change.

3.5.5 It is therefore considered that the potential changes to the proposed development would not result in material changes to the phase two surface water assessment during construction or operation.

3.6 Water resources – flood risk

3.6.1 The phase two, Level 1 Flood Risk Assessment can be found in Section 15 of Volume 9 of the PEIR.

3.6.2 The potential alignment of the temporary and permanent access roads lies within the area identified as less susceptible to surface water flooding in the London Borough of Richmond upon Thames Level 1 Strategic Flood Risk Assessment. Therefore the flood risk to the site from land and surface water run-off would remain low. The assessment of preliminary effects, presented in the PEIR, of flood risk from the site from land and surface water run-off only considered the area of the main construction site and permanent operational area. It did not include the area of the temporary or permanent access road therefore the assessment remains as presented in the PEIR because the only change from the phase two proposals is the alignment of the access road.

3.6.3 The potential change to the alignment of the construction and permanent access road does not affect the level of risk associated with other forms of flooding as it does not propose changes to the flood defences or include significant ground works therefore flood risk identified from other sources such as tidal and groundwater would remain as identified in the PEIR. The
risk of flooding from all other sources therefore remains as reported in the *PEIR*.

3.6.4 It is therefore considered that the potential changes to the proposed development would not result in significant changes to the phase two flood risk assessment during construction or operation.
4 Topics with materially different effects from phase two

4.1 Introduction

4.1.1 This section presents an update to the PEIR as it relates to Barn Elms, taking account of the potential changes to the proposed development which are being considered in response to comments made during phase two consultation. It addresses those topics where the changes under consideration have the potential to give rise to materially different effects compared to those presented in the PEIR published at phase two consultation.

4.2 Air quality and odour

4.2.1 The phase two assessment for air quality and odour can be found in Section 4 of Volume 9 of the PEIR.

4.2.2 The potential changes to the alignment of the construction access road introduce new receptors for the air quality construction assessment, at Nos. 3, 5 and 7 Queen Elizabeth Walk and residential receptors at the junction of Queen Elizabeth Walk and Rocks Lane. It also increases the proximity of existing receptors, namely the London Wetland Centre SSSI and the Barn Elms Schools Sports Centre, all of which would be approximately 5m from the site boundary of the access road, compared to within 150m and 70m respectively in the phase two proposals. The residential receptors on Rocks Lane adjacent to the phase two construction access point would no longer be significantly affected by the proposals. All other receptors remain as reported in the PEIR. The potential change to the construction access road would also require the demolition of the northern existing changing room facility and relocation of the track and field facilities in the northeast of the Barn Elms Schools Sports Centre.

4.2.3 Based on professional judgement it is considered that impacts from construction road traffic emissions would remain small, as reported in the PEIR. Although new receptors would be introduced (Nos. 3, 5 and 7 Queen Elizabeth Walk and at the junction of Rocks Lane and Queen Elizabeth Walk), it is considered that the local air quality effect of construction on residential properties would remain a minor adverse effect as reported in the PEIR. Given the high sensitivity of the London Wetlands Centre SSSI, it is anticipated that the increased proximity of this receptor to the construction access road would increase local air quality effects from road traffic emissions. However, based on professional judgement, considering the number of HGVs using the access road, the effect would remain minor adverse as reported in the PEIR.

4.2.4 A qualitative assessment of construction dust impacts has been undertaken. The demolition of the existing structures has the potential to elevate construction dust levels. The construction of the new access road
and movement of construction vehicles would also be likely to increase dust emissions in this area. Given the proximity of the Barn Elms Schools Sports Centre and the London Wetlands Centre to these activities it is considered that the construction dust effects on these receptors would be elevated from negligible to minor adverse although remain as not significant. The additional Queen Elizabeth Walk residential receptors would also experience minor adverse effects as a result of the emissions from the construction road traffic. The overall construction dust effect on residential properties would remain a minor adverse effect as reported in the PEIR.

4.2.5 As stated in para 4.7.1 of PEIR Volume 9, the control measures outlined in the Code of Construction Practice Part A would be adhered to and no mitigation measures are required for air quality.

4.2.6 All other construction phase effects remain as reported in the PEIR. In terms of the operational phase, there would be no change to the negligible odour effects identified in the PEIR because the permanent structures and their location remain the same.

4.2.7 It is therefore considered that the potential changes to the proposed development, which would introduce new receptors and result in elevated construction dust effects at the Barn Elms Schools Sports Centre and the London Wetlands Centre, would result in material changes to the phase two air quality assessment during construction although the effects would remain not significant.

4.3 Ecology – terrestrial

4.3.1 The phase two assessment for terrestrial ecology can be found in Section 6 of Volume 9 of the PEIR.

4.3.2 The potential change to the alignment of the access road would reduce impacts on the Barn Elms Playing Field site of importance for nature conservation (SINC), as the designated site would no longer be traversed by the construction access road. The new alignment of the construction access route would instead comprise amenity grassland and hardstanding. Removal and pruning of trees would still be required along the alignment of the construction access road, albeit in a different location given the new alignment. Under the phase two proposals, mature trees would have been removed and pruned near the Beverley Brook and highway access point on Rocks Lane. Under the revised proposals, fewer mature trees would be removed near the Beverley Brook by the main construction site and along the northern and eastern perimeters of the Barn Elms Schools Sports Centre. The new alignment to the north and east of the sports centre would place passing construction traffic in closer proximity to the London Wetlands Centre SSSI as it lies approximately 5m from the site boundary of the access road. It remains 600m to the northwest of the main construction works.

4.3.3 It is considered that there would be no impact and therefore no significant effects on the Barn Elms Playing Field SINC because there would be no loss of habitat and as the site is designated for its grassland interest no
disturbance from construction activities is anticipated. Thus no mitigation is required. The PEIR had previously identified a moderate adverse effect on this SINC (see Volume 9, para. 6.5.1 and 6.5.9).

4.3.4 The removal and pruning of trees would be required to enable construction of the access road. However, this involves the clearance of amenity grassland only, which is not ecologically valuable vegetation. Therefore the effects on vegetation would remain a minor adverse effect (site level). Mitigation measures would be as set out in the PEIR.

4.3.5 It is considered that as the main construction site remains removed from the London Wetland Centre SSSI, the only potential impacts on this receptor would be disturbance from passing construction traffic, which would be intermittent in nature. As stated within the PEIR, the findings of the notable species surveys and assessment of effects on these species and the London Wetlands Centre SSSI will be presented in the Environmental Statement. That remains the case, and potential changes are therefore not considered here.

4.3.6 All other construction phase effects would be as set out in the PEIR.

4.3.7 The operational phase has not been assessed, as in the PEIR, because the operational activity would remain limited to occasional maintenance visits and there would be no operational lighting at the site.

4.3.8 As a result of the potential changes the Barn Elms Playing Field SINC is no longer impacted by the proposed development, thus this is a material change to the phase two terrestrial ecology assessment.

4.4 Historic environment

4.4.1 The phase two assessment for historic environment can be found in Section 7 of Volume 9 of the PEIR.

4.4.2 The potential change to the construction and permanent access road alignment to the north and east of the site is of relevance to the historic environment assessment. The overall area requiring soil stripping for construction of the access road would be reduced from approximately 8000m$^2$ to 4500m$^2$ (based on the maximum 5m width of the construction access road and total length of construction and permanent access roads). This is because the same alignment would be used for the construction and permanent phases and the distance covered would be less, approximately 900m compared to a total of approximately 1.6km.

4.4.3 The revised boundary for the alignment of the access road includes a changing room facility to be demolished, in the northern part of the site. It is no more than 50 years old and is not considered to be of heritage interest and is therefore not considered further.

4.4.4 Historic environment receptors would change, with some additional receptors falling within the revised site boundary whilst others would now fall outside it. These changes in receptors would lead to changes in effects on buried heritage assets, which have been assessed qualitatively, based on professional judgement and are described below.
4.4.5 Medieval and post-medieval remains of landscaping and fishponds associated with the Barn Elms manor house (Historic environment assets [HEA] 1B, 1C, 1D, 1E, 1F and 1G) would no longer lie within the site boundary. There would therefore be no effects on them as a result of the potential changes.

4.4.6 The potential change to the alignment of the access road would reduce the total area of ground disturbance from preliminary soil stripping. This alignment and reduced area would reduce the likelihood of encountering possible, previously unrecorded, archaeological remains (low to high asset significance), although the potential for encountering such remains would remain low, as stated in the PEIR. Thus the effect would remain unknown (of minor to major adverse significance), as per para. 7.5.5.i of PEIR Volume 9.

4.4.7 Similarly, there is potential for a reduced impact upon prehistoric settlement remains (high potential), in terms of the total area of proposed impact, although the environmental effect on this asset would remain major adverse, as stated in para 7.5.5.c of Volume 9 of the PEIR.

4.4.8 Two additional potential post-medieval assets would fall within the revised site boundary. There is a high potential for possible surviving buried remains of 19th century water management, in the form of flood gates (low asset significance) located on the proposed access road where it turns westwards away from the river, and for footings of early 20th century stables/outbuildings (low asset significance) located along the proposed access route, just east of the existing changing rooms. The potential for post-medieval remains is therefore high (rather than moderate to high as stated in para 7.5.5 of Volume 9 of the PEIR). Soil stripping and grading for construction of the access road would reduce the heritage significance of these assets from low to negligible, resulting in two minor adverse effects, additional to those reported in the PEIR.

4.4.9 The potential for other heritage assets identified in the PEIR, such as later medieval flood defences and post-medieval pump houses and tanks, would remain as stated in the PEIR. Thus all other effects would remain as reported in the PEIR.

4.4.10 As reported in the PEIR, the assessment of effects on the setting of heritage assets will be presented in the Environmental Statement as appropriate.

4.4.11 It is therefore considered that the potential changes to the proposed development, arising from the effects on two additional potential post-medieval assets, would result in material changes to the phase two historic environment assessment during construction.

4.5 Noise and vibration

4.5.1 The phase two assessment for noise and vibration can be found in Section 9 of Volume 9 of the PEIR.

2 As shown on PEIR Vol 9 Fig 7.4.1 and listed in Vol 9 Appendix A.3 Gazetteer of known heritage assets
4.5.2 The potential change to the alignment of the construction access road introduces new receptors for the noise and vibration assessment, at 3, 5 and 7 Queen Elizabeth Walk, mixed use properties at the junction of Rocks Lane and Queen Elizabeth Walk and the Barn Elms Boat House, which would both be within 5m of the site boundary. The potential route of the construction access road would also require the demolition of the existing changing room and track and field facilities in the northeast of the Barn Elms Schools Sports Centre. Information on these additional noise and vibration sensitive receptors are given in Appendix C, Table C.1 and Table C.2.

4.5.3 The highway works at the corner of Rocks Lane and Queen Elizabeth Walk are short duration daytime works and whilst not quantitatively assessed, considering the duration it is unlikely that significant effects would arise from these activities at any of the receptors. Thus, the properties on the junction of Rocks Lane and Queen Elizabeth Walk are only qualitatively assessed for effects from construction traffic.

4.5.4 The following paragraphs present the quantitative assessment of the main construction activities for the Boat House and residential properties on Queen Elizabeth Walk.

4.5.5 The Boat House is considered as a recreational resource. It is a two storey building. A summary of construction noise impacts and their magnitudes, including on-site vehicle movements, from construction activities is presented in Appendix C, Table C.3. Given the medium sensitivity and recreational use of the facility, the construction noise level above the assumed ambient noise level is such that it is considered that there would not be a significant noise effect on this receptor.

4.5.6 Nos. 3, 5 and 7 Queen Elizabeth Walk are residential dwellings located close to the temporary access road. A summary of construction noise impacts and their magnitudes, including on-site vehicle movements, from construction activities is presented in Appendix C, Table C.4. The construction noise levels predicted at this site are below the potential significance criterion for this residence, so it is considered that there would not be a significant noise effect on this receptor.

4.5.7 A qualitative assessment of construction traffic (movements from outside the site boundary) has been undertaken for the Rocks Lane and Queen Elizabeth Walk properties. This assessment indicates that a significant effect is unlikely from this noise source to the Rocks Lane properties, owing to the relatively high levels of existing traffic on Rocks Lane. Properties on Queen Elizabeth Walk experience much lower levels of existing traffic than Rock Lane. However, based on the parking facilities at the London Wetlands Centre and Barn Elms Playing Fields and Schools Sports Centre, the existing levels of traffic associated with these facilities are likely to be such that the additional numbers of vehicle movements are unlikely to result in a significant effect.

4.5.8 Potential construction vibration impacts on adjacent buildings / structures and humans have been assessed for the Queen Elizabeth Walk residential receptors and the Barn Elms Boat House (see Appendix C, Table C.5 and Table C.6). No impacts have been identified on either of
the additional receptors, therefore no significant vibration effects are anticipated.

4.5.9 The assessment of potential construction vibration impacts (see Appendix C, Table C.6) has not identified any impacts on the Queen Elizabeth Walk residential receptor or the Barn Elms Boat House therefore no significant vibration effects are anticipated.

4.5.10 The approach to mitigation for significant noise and vibration effects would be the same as that reported in the **PEIR**.

4.5.11 All other construction and operational effects remain as reported in the **PEIR**. There would be no operational effects at the additional receptors because as reported in the **PEIR** no operational effects have been identified from the operation of the tunnel and maintenance activities, therefore there would be no effects on the additional receptors.

4.5.12 Overall, whilst new receptors have been introduced in the assessment as a result of the potential changes to the proposed development, itself a material issue, it is considered that the effects on these new receptors would not be significant.

### 4.6 Socio-economics

4.6.1 The phase two assessment for socio-economics can be found in Section 10 of Volume 9 of the **PEIR**.

4.6.2 The potential change to the alignment of the construction access road to the north and east of the Barn Elms Schools Sports Centre and associated demolition of facilities could affect users of the site and surrounding area and has the potential to affect amenity due to dust, emissions, noise, vibration and visual effects, different to that set out in the **PEIR**. Similarly the potential location of the permanent access road along this alignment is relevant to the operational assessment of visual effects. However, it should be noted that the majority of effects would be associated with the construction works site and permanent operational area, which remain the same.

4.6.3 The potential change to the alignment of the construction access road introduces new residential receptors (at Nos. 3, 5 and 7 Queen Elizabeth Walk and at the junction of Queen Elizabeth Walk and Rocks Lane). It also introduces new recreational receptors at the Barn Elms Boat House. The potential change introduces the London Wetlands Centre as a new receptor and increases the proximity of an existing receptor, namely the Barn Elms Schools Sports Centre. All of these receptors would be within 5m of the access road site boundary.

4.6.4 Socio-economic effects resulting from potential changes to the proposed development have been assessed through qualitative assessment based on professional judgement.

4.6.5 There would be temporary land take of open space during the construction phase, however, the potential alignment of the construction access road would not affect playing pitch capacity. The provision of alternative changing room and track and field facilities in advance of those that would
be demolished, would result in no change to users as there would be continuity of provision. Therefore the magnitude of impact would be negligible and, given the medium sensitivity of the receptor, the effect from temporary land take and demolition/provision of alternative facilities on users of the Barn Elms Schools Sports Centre would be negligible.

4.6.6 Amenity effects on users of open space, resulting from noise, vibration, air quality and visual effects would remain as predicted in para. 10.5.18 to 10.5.26 of Volume 9 of the *PEIR* assessment, with overall minor adverse effects. The construction dust effects would be elevated at the Barn Elms Schools Sports Centre but would still not be considered significant. Given that the Centre is not identified as a noise or vibration receptor, that the visual impact assessment remains unchanged in relation to the Barn Elms School Sports Centre, and the type of recreational activities that the sports centre is used for, it is considered that this would not prevent the ongoing use of the sports centre for games or elevate the overall significance of the effect.

4.6.7 Amenity effects on residents, resulting from noise, air quality and visual effects would remain as predicted in para. 10.5.27 to 10.5.35 of Volume 9 of the *PEIR* assessment with overall minor adverse effects. This is on the basis that, although there would be additional residential receptors assessed for noise, air quality and dust, these receptors would not experience significant noise, air quality or dust effects. On this basis, this would mean that there would be no change in the overall experience of amenity by nearby residential receptors from the minor adverse effect set out in the *PEIR*.

4.6.8 Amenity effects on users of the Thames Path would remain as predicted in para. 10.5.44 to 10.5.52 of Volume 9 of the *PEIR* assessment, with negligible overall amenity effects for users. This is on the basis that there is a reduced visual effect and that the Thames Path has not been identified as an air quality, construction dust, noise or vibration receptor. This would mean that users of the Thames Path would not experience any significant effects of the type that could cause an overall reduction in amenity.

4.6.9 Amenity effects on users of Beverley Brook footpath, resulting from visual effects, would reduce from the minor adverse effect predicted in para. 10.5.36 to 10.5.43 of Volume 9 of the *PEIR* assessment to a negligible overall amenity effect. This is on the basis that the potential change to the alignment of the access route would also mean that users of Beverley Brook footpath would be less exposed to impacts along that path.

4.6.10 The potential change to the alignment of the construction access route would introduce the Barn Elms Boat House as new receptors. There would be potential for users to experience a reduction in amenity. However, no significant air quality, construction dust or noise and vibration effects have been identified. Further the receptor is not identified as a visual receptor. Thus, it is considered that users would experience a negligible overall amenity effect as a result of the potential changes.

4.6.11 The potential change to the alignment of the construction access route and its proximity to the London Wetlands Centre would introduce it as a
new socio-economic receptor with respect to the potential for amenity-related effects to disrupt and potentially deter people from visiting the centre. It is considered as a recreational facility and tourism asset and the centre would have medium sensitivity to such effects. Minor adverse air quality and construction dust effects have been identified although the centre has not been identified as a receptor for noise and vibration or visual effects. Thus the overall amenity impact would be low and the effect on the centre would be minor adverse and therefore not significant.

4.6.12 All other construction phase effects would remain as presented in the PEIR, and is it not considered that the proposed works would introduce any new receptors.

4.6.13 It is therefore considered that the potential changes to the proposed development, which would introduce new receptors, give rise to decreased effects on the Beverley Brook footpath and new effects on the London Wetland Centre, would result in material changes to the phase two socio-economic assessment during construction although the effects would be not significant.

4.7 Townscape and visual

4.7.1 The phase two assessment for townscape and visual can be found in Section 11 of Volume 9 of the PEIR.

4.7.2 The baseline and receptors would remain as reported in the PEIR.

4.7.3 Effects resulting from changes in the proposed development have been assessed qualitatively based on professional judgement, in line with the PEIR.

4.7.4 During construction, the majority of the site’s townscape components described in the PEIR would be unaffected by the potential change to the construction access road. Although the demolition of the changing room facilities would provide an additional effect, the intensity of construction activity at the main site would remain unchanged. This would mean that townscape effects on the site would remain of major adverse significance.

4.7.5 Effects on the majority of townscape character areas during construction would remain as reported in the PEIR, with the exception of the following which would experience reduced effects:

a. Castelnau Residential, which would still experience no effects due to the alternative construction access route (assessed as minor adverse in para. 11.5.7 of the PEIR Volume 9).

b. Leaders Gardens, which would still experience effects from the presence of construction activity and cranes but not construction traffic. The effect is considered to be minor adverse due to the setting of the area being affected to a limited extent by these activities (assessed as moderate adverse in para. 11.5.44 of the PEIR Volume 9).

c. Barnes Common, which would experience effects from the presence of construction activity but not construction traffic. The effect is
considered to be minor adverse due to part of the setting of this area being affected to a limited extent by construction activity (assessed as moderate adverse in para. 11.5.47 of the PEIR Volume 9).

4.7.6 Effects on the majority of viewpoints during construction would remain as reported in the PEIR, with the exception of:

a. Viewpoint 1.4: Panoramic view northwest to northeast from residences along Horne Way – views would still be affected by site hoardings, construction activity and construction plant within the site but no longer by traffic along the haul road. However, the finding of the assessment (moderate adverse) would remain unchanged as the proposed construction activity would still result in a noticeable deterioration in the view (see para. 11.5.57 of PEIR Volume 9).

b. Viewpoint 2.9: View northwest from Leaders Gardens – receptors at this viewpoint would still experience effects from site hoardings and construction plant at the site but no longer from the wider presence of site hoardings along the construction access assessed in the PEIR. The effect is considered to be of a reduced minor adverse significance (assessed as moderate adverse in para. 11.5.75 in PEIR Volume 9).

c. Viewpoint 2.10: View southwest from Embankment at Beverley Brook - receptors at this viewpoint would still experience effects from site hoardings and construction plant at the site but no longer from the wider presence of site hoardings along the construction access assessed in the PEIR. The effect is considered to be of a reduced minor adverse significance (assessed as moderate adverse in para. 11.5.77 in PEIR Volume 9).

d. Viewpoint 2.11: View northeast from Barnes Common – receptors at this viewpoint would experience reduced negligible effects due to the intermittent visibility of cranes (assessed as minor adverse in para. 11.5.79 in PEIR Volume 9).

e. Viewpoint 2.12: View east from the Beverley Brook footpath, close to the running track - receptors at this viewpoint would experience reduced negligible effects due to the intermittent visibility of cranes (assessed as moderate adverse in para. 11.5.81 in PEIR Volume 9).

4.7.7 No new mitigation is required for the reduced effects arising from the potential change to the construction access road.

4.7.8 Operational phase effects would remain as reported in the PEIR because the limited change to the northern extent of the access road does not materially alter the proposed development originally assessed for townscape and visual assessment.

4.7.9 It is therefore considered that the potential changes to the proposed development, arising from the decreased effects on a number of townscape character areas and viewpoints, would result in material changes to the phase two townscape and visual assessment during construction.
4.8 **Transport**

4.8.1 The phase two assessment for transport can be found in Section 12 of Volume 9 of the *PEIR*.

4.8.2 The potential change to the alignment of both the construction and permanent access road is of relevance to the transport assessment.

4.8.3 The potential access changes described in Section 2 of this *Addendum* would result in increased vehicle flow along Queen Elizabeth Walk. Access to the site from the TLRN for construction vehicles would still be from the south via Rocks Lane, albeit from a different entry point. This proposed entry point would require measures (para. 2.3.5) at the Queen Elizabeth Walk and Rock Lane junction to enable Heavy Goods Vehicles (HGVs) to negotiate the junction.

4.8.4 The transport baseline and receptors would remain as reported in the *PEIR*.

4.8.5 Effects resulting from the potential changes in the proposed development have been assessed qualitatively based on professional judgement, in line with the approach adopted in the *PEIR*.

4.8.6 Construction vehicles would access Queen Elizabeth Walk via an existing signalised junction. There would be no other alterations to pedestrian routes, cycle routes and bus stops.

4.8.7 Although there would be increased traffic flow along Queen Elizabeth Walk, and therefore increased severance for pedestrians crossing Queen Elizabeth Walk, the low number and frequency of construction vehicles would mean that there would remain a moderate adverse effect on pedestrians and a negligible effect on cyclists during construction.

4.8.8 With regard to bus users and operators, there is the potential for conflict with bus route 283 which serves the London Wetlands Centre between the junction with Rocks Lane and the London Wetlands Centre. Given the volume of construction traffic movements, however, it is considered that this would have a negligible effect on buses. The *PEIR* (see para. 12.5.49 of *PEIR* Volume 9) had identified a minor adverse effect resulting from the relocation of an existing bus stop; however with the new alignment this relocation would not be required.

4.8.9 Further conflicts between large construction vehicles and large vehicles, such as coaches, accessing the sports centre car park could occur along Queen Elizabeth Walk. The low volume of construction vehicle movements would have a negligible effect on road users on Queen Elizabeth Walk.

4.8.10 Overall, the movement of HGVs, the changes to the highway layout outlined and potential delays to journey times from increased vehicle movement would have a minor adverse effect on all road users. This is reduced from moderate adverse reported in the *PEIR* where the vehicular access off Rocks Lane was expected to result in a greater adverse effect due to construction vehicles needing to undertake an uncontrolled right-turn into the playing fields.
4.8.11 The measures at the junction with Rocks Lane and Queen Elizabeth Walk may require the suspension of some parking on Rocks Lane on approach to the junction from the south in order for the stop line to be relocated south to allow large vehicles to undertake the left-turn out of Queen Elizabeth Walk. If required this suspension of parking would have a minor adverse effect on parking during construction. There would be no other effects on parking.

4.8.12 There would be no effects other than those already mentioned on pedestrians, cyclists, bus users and operators, parking and all road users during the construction phase.

4.8.13 The effects identified on pedestrians and cyclists could be mitigated through the creation of passing points for vehicles on the western end of Queen Elizabeth Walk and signal optimisation at the Rocks Lane and Queen Elizabeth Walk junction could also be used to minimise effects on road users. Other mitigation measures would be the same as set out in the PEIR.

4.8.14 The negligible operational phase effects remain as reported in the PEIR because the limited potential change to the northern extent of the access road alignment does not materially alter the proposed development originally assessed in the transport assessment. However, the revised routing (along the northern and eastern sections of the sports centre, rather than along the existing access to the Boat House / Sailing Club facilities) is considered improved because it further reduces the opportunity for vehicle and pedestrian conflicts.

4.8.15 It is therefore considered that the potential changes to the proposed development, arising from the decreased effects on buses and all road users, would result in material changes to the phase two transport assessment during construction.
Appendix A Plans of potential changes to the proposed development at Barn Elms

Please see individual A3 drawings as follows:

A.1 – Barn Elms - Targeted Consultation - Demolition and Site Clearance Plan - Sheet 1 - 110-DA-CVL-PRD2X-000748

A.2 – Barn Elms - Targeted Consultation - Demolition and Site Clearance Plan - Sheet 2 - 110-DA-CVL-PRD2X-000749

A.3 – Barn Elms - Targeted Consultation - Demolition and Site Clearance Plan - Sheet 3 - 110-DA-CVL-PRD2X-000750

A.4 – Barn Elms - Targeted Consultation - Demolition and Site Clearance Plan - Sheet 4 - 110-DA-CVL-PRD2X-000751

A.5 – Barn Elms - Permanent works - sheet 1 - 110-DA-CVL-PRD2X-000752
Appendix B Plans of the phase two proposed development at Barn Elms

Please see individual A3 drawings as follows:

B.1 – Barn Elms - Demolition and Site Clearance Plan - Sheet 1 - 110-DA-CVL-PRD2X-000211

B.2 – Barn Elms - Demolition and Site Clearance Plan - Sheet 2 - 110-DA-CVL-PRD2X-000212

B.3 – Barn Elms - Demolition and Site Clearance Plan - Sheet 3 - 110-DA-CVL-PRD2X-000213

B.4 – Barn Elms - construction - phase 1 - 110-DA-CNS-PRD2X-000214

B.5 – Barn Elms - construction - phase 2 - 110-DA-CNS-PRD2X-000215

B.6 – Barn Elms - Permanent works - sheet 1 - 110-DA-CVL-PRD2X-000216

B.7 – Barn Elms - Permanent works - sheet 2 - 110-DA-CVL-PRD2X-000217
### Appendix C Noise and vibration supporting tables

#### Vol 9 Table C.1 Additional noise and vibration sensitive receptor locations, categories and their values/sensitivities

<table>
<thead>
<tr>
<th>Ref</th>
<th>Receptor addresses</th>
<th>Building use</th>
<th>Sensitivity</th>
<th>No. of noise sensitive properties/area(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BE07</td>
<td>Barn Elms Boat House</td>
<td>Recreation</td>
<td>Medium</td>
<td>1</td>
</tr>
<tr>
<td>BE08</td>
<td>No’s 3, 5 &amp; 7 Queen Elizabeth Walk</td>
<td>Residential</td>
<td>High</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Vol 9 Table C.2 Additional noise and vibration sensitive receptors and airborne construction noise assessment categories

<table>
<thead>
<tr>
<th>Ref</th>
<th>Noise sensitive receptor</th>
<th>Ambient noise level, rounded to nearest 5dB$L_{Aeq}$</th>
<th>Assessment category$^1$</th>
<th>Significance criterion threshold level$^1$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Day,$dBL_{Aeq}$, 10hour</td>
</tr>
<tr>
<td>BE07</td>
<td>Boat House</td>
<td>-</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>BE08</td>
<td>No’s 3, 5 &amp; 7 Queen Elizabeth Walk</td>
<td>-</td>
<td>A</td>
<td>65</td>
</tr>
</tbody>
</table>

$^1$ From ‘ABC’ method – BS5228:2009 Code of practice for noise and vibration control on construction and open sites

$^2$ Baseline measurement data not available for this report

#### Vol 9 Table C.3 Noise and vibration summary of construction noise impacts and their magnitudes during construction at receptor BE07, Boat House

<table>
<thead>
<tr>
<th>Receptor</th>
<th>No. of noise sensitive properties</th>
<th>Value/ sensitivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boat House</td>
<td>1</td>
<td>Medium</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Activity</th>
<th>Construction noise level$^1$, $dBL_{Aeq}$</th>
<th>Assume$^1$ damped ambient$^2$ baseline $dBL_{Aeq}$</th>
<th>Magnitude/ justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction Access Road</td>
<td>60</td>
<td>&lt;55</td>
<td>4dB increase relative to assumed average baseline ambient level</td>
</tr>
</tbody>
</table>

$^1$ Construction noise only

$^2$ Baseline measurement data not available for this report
Vol 9 Table C.4 Noise and vibration summary of construction noise impacts and their magnitudes during construction at receptor BE08 3, 5 and 7 Queen Elizabeth Walk

<table>
<thead>
<tr>
<th>Receptor</th>
<th>No. of noise sensitive properties</th>
<th>Value/sensitivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nos. 3, 5 and 7 Queen Elizabeth Walk</td>
<td>3</td>
<td>High</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Activity</th>
<th>Construction Noise level(^1), dBL(_{Aeq})</th>
<th>Significance criterion threshold level, dBL(_{Aeq})</th>
<th>Magnitude/justification</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Excess above criterion , dBL(_{Aeq})</td>
</tr>
<tr>
<td>Ground and upper floor</td>
<td></td>
<td></td>
<td>-3</td>
</tr>
<tr>
<td>Temporary Access Road</td>
<td>62</td>
<td>65</td>
<td></td>
</tr>
</tbody>
</table>

\(^1\) Construction noise only
\(^2\) Worst case floors assessed – not necessarily the highest floor level.

Vol 9 Table C.5 Summary of vibration impacts at buildings / structures and their magnitudes during construction at additional receptors

<table>
<thead>
<tr>
<th>Ref</th>
<th>Receptor</th>
<th>Impact (highest predicted PPV across all activities, mm/s)</th>
<th>Value/sensitivity</th>
<th>Magnitude and justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>BE07</td>
<td>Boat House</td>
<td>&lt;0.5</td>
<td>Medium</td>
<td>No impact: Below threshold for potential cosmetic damage</td>
</tr>
<tr>
<td>BE08</td>
<td>Nos. 3, 5 &amp; 7 Queen Elizabeth Walk</td>
<td>&lt;0.5</td>
<td>High</td>
<td>No impact: Below threshold for potential cosmetic damage</td>
</tr>
</tbody>
</table>
Vol 9 Table C.6 Summary of human response vibration impacts and their magnitudes during construction at additional receptors

<table>
<thead>
<tr>
<th>Ref</th>
<th>Receptor</th>
<th>Impact (highest predicted VDV across all activities, m/s(^{1.75}))</th>
<th>Value/sensitivity</th>
<th>Magnitude and justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>BE07</td>
<td>Boat House</td>
<td>&lt;0.1</td>
<td>Medium</td>
<td>No impact: Below low probability of adverse comment</td>
</tr>
<tr>
<td>BE08</td>
<td>Nos. 3, 5 &amp; 7 Queen Elizabeth Walk</td>
<td>&lt;0.1</td>
<td>High</td>
<td>No impact: Below low probability of adverse comment</td>
</tr>
</tbody>
</table>
Appendix D References

BS5228:2009 *Code of practice for noise and vibration control on construction and open sites*
For further information see our website: www.thamestunnelconsultation.co.uk or call us on 0800 0721 086.