

4. Approach to the ES Further Information Report

4.1 Introduction

4.1.1 This Chapter sets out the general approach to the EIA process of the Phase 1A (North) RMAs following on from that undertaken for the s.73 Application by ERM. The aims of the Report are set out together with an explanation of how the scope of the ES Further Information Report was developed and agreed in consultation. The basis of the assessments and key assumptions with regard to phasing, construction and operation of the Scheme as well as technical matters such as traffic data and cumulative schemes are also described.

4.2 Aims of the ES Further Information Report

4.2.1 The main aims of this ES Further Information Report are to:

- a) Review the s.73 ES in light of the detailed design of the Phase 1A (North) RMAs and the current baseline conditions;
- b) Confirm that the s.73 ES documentation remains valid for the purposes of decision making, and / or provide 'further environmental information' where considered necessary, pursuant to the s.73 ES to ensure that decision making takes into account the likely significant environmental effects of the Scheme (with the Phase 1A (North) RMAs in place);
- c) Summarise changes to the likely significant effects reported in the s.73 ES as a result of the detailed RMA designs or the availability of other new information.

4.3 Defining the Scope of the ES Further Information Report

4.3.1 A draft EIA Scoping Report was submitted in September 2014 to LBB which was informed by the scope of the s.73 ES and details of the emerging Phase 1A (North) RMAs, and set out the proposed approach and content of the ES Further Information Report. The content of the draft Scoping Report was discussed informally at a meeting with LBB and its advisors Capita on 7th October 2014. The EIA Scoping Report was subsequently submitted to LBB together with a formal request for a Scoping Opinion in October 2014. A copy of the EIA Scoping Report is included at **Appendix 4.1**.

4.3.2 Consultation responses relevant to the Scoping Report and a copy of the Scoping Opinion are provided at **Appendix 4.2** and further details are provided in **Section 4.4**. Where appropriate, consultation responses are considered within the Consultation section of each technical chapter (**Chapters 7 to 21**).

4.3.3 The Scoping Report was issued to a range of bodies with a potential interest in the Phase 1A (North) RMAs including:

- LB Barnet;
- LB Brent;
- LB Camden;
- Environment Agency;
- Highways Agency;
- Natural England;

- English Heritage and Greater London Archaeology Advisory Service (GLAAS);
- Sport England;
- North London Waste Authority;
- Transport for London;
- Thames Water;
- Hertsmere Council;
- National Grid; and
- London Wildlife Trust.

4.3.4 As part of the scoping discussions with LBB, Waterman agreed the following key elements:

- **Viewpoint Locations:** The location of viewpoints for the purposes of the updated townscape and visual impact assessment (included at **Chapter 10**) were provided to LBB for comment and subsequently agreed.
- **Cumulative Schemes:** The cumulative schemes which needed to be considered in the Report were agreed with LBB (see **Section 4.6** for further details).
- **Traffic Data:** The basis of the traffic data used for the purposes of the air quality and noise modelling was agreed in discussion with LBB.
- **Temporary Bus Station and Bus Stops:** The approach to the impact assessment of the temporary bus station and bus stops (Plots 113 and 114).

4.3.5 The technical scope of the ES Further Information Report is set out in **Table 1.2** and summarises where statements of conformity against the s.73 ES or where further assessment is provided for each technical topic.

4.3.6 The Site boundary for the Scheme remains as consented in the 2014 Permission. The geographical, or spatial scope of the EIA therefore replicates that of the s.73 ES technical studies which were accepted by LBB and the statutory bodies.

4.4 EIA Scoping Opinion

4.4.1 A formal scoping opinion was received from LBB on 16th December 2014 (Ref: 14/07147/ESC) (see **Appendix 4.2**). Waterman subsequently met with LBB to discuss the scoping opinion and to respond to the comments or queries. **Table 4.1** summarises the scoping responses from LBB and statutory consultees. Alongside each comment, it is indicated where in the ES Further Information Report details have been provided to respond to the comment, or a written response is provided within the table itself.

Table 4.1: December 2014 EIA Scoping Opinion (14/07147/ESC) and Responses

Chapter Topic	Consultee	Scoping Opinion Comment	Response
	LBB & Capita	Further information report should clearly relate directly to the specific Phase 1A (north) RMAs that it assesses and should include relevant red-line application plans to sufficiently delineate the application sites within the parameters of the original s.73 permission.	Phasing plans for 1A (North) clearly illustrate the elements within this development phase in isolation from the rest of the s.73 Scheme. We do not consider that a red line boundary is appropriate in this instance as the elements of Phase 1A (North) are spatially diverse and highway boundaries are hard to define.
General	LBB & Capita	The temporary works and CCC are not currently included within the proposed EIA Scoping Report. Neither have agreed locations at the time of writing.	As discussed and agreed with LBB subsequent to receipt of the scoping opinion. The temporary bus station and associated bus stops will be included in the Phase 1A (North) infrastructure RMA and will be assessed for potential environmental impacts within this ES Further Information Report. Additional temporary works including temporary roads and bridges during the initial construction period but those elements with a shorter duration than the bus station, will be submitted and assessed as a separate RMA following the 1A (North) submission. The need for further environmental information will be considered at the RMA stage. The Construction Consolidation Centre (CCC) has been assessed under a feasibility study for condition 1.19 (pre-RMA). This report has been submitted to LBB to discharge the condition and subsequent responses have been submitted for clarification. At this stage a CCC location has not been confirmed by the Development Partners, however the feasibility report highlights the preferred options. The need for any further environmental information will be considered once the details are confirmed (to be available in the Construction Transport Management Plan (CTMP) which is required pre-commencement).
	LBB & Capita	Alternative locations for the bus station must be considered and assessed. A reason for the choice of location must be given taking into account the environmental impacts.	URS have produced a Temporary Bus Station report (November 2014) which provides details of the design evolution and options analysis for the temporary bus station. Environmental studies were undertaken for air quality and noise to input to the optioneering process in 2014. The initial results of which were shared with the environmental health officer (EHO) at LBB and through discussions particularly with regard to noise sensitivities, this ultimately influenced the movement of the temporary bus station away from Plot 113 to the south west car park.

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	LBB	It would be sensible to prepare one RMA for all the items of Critical Infrastructure, both temporary and permanent works.	It has been agreed that both temporary and permanent infrastructure associated with Phase 1A (North) would be submitted together for this RMA in relation to the temporary bus station and stops. It is also noted however that it is not possible at present to submit the plans and consider the need for further environmental information in respect of the additional temporary works (roads and bridges) until the details come forward from the construction planning in 2015.
	LBB	A full robust explanation within the ES Further Information Report accompanying the first RMAs, regarding the temporary works and the timing of any additional RMA submission explaining how the environmental impacts that may arise will be assessed.	As above. A description of the temporary bus station included in this RMA is provided in Section 2.4 of this Report and further explanation on the scope of this assessment is provided in Section 4.8 .
	LBB	No detailed layout has been agreed for the Development Plots 53 and 54, Brent Terrace. It is expected that the ES Further Information Report considers the environmental impacts arising from the detailed scheme submitted with the Phase 1A (North) RMAs.	The detailed layout for Plots 53 and 54 has since been agreed with LBB and plans and unit mix updated by Haworth Tompkins. This Report provides further information (where necessary) based on the final unit numbers, unit sizes and the addition of doorstep play space as described in Chapter 2 and Chapter 8 Socio-Economics .
	LBB	Query in relation to page 19. "the Phasing and Sequencing of Phase 1A (North) is not expected to change further..." and whether this takes into account the temporary bus station sequencing.	The Temporary Bus Station is now included in the infrastructure RMA for Phase 1A (North) and assessed accordingly. Other sub-phasing changes such as plots 53 and 54 have been captured through the appropriate approval process for Planning Condition 4.2. Further commentary on Condition 4.2 is provided below this table. Temporary works including the temporary bus station and bus stops are not included in the indicative construction plan (ICP), only permanent works are shown. As such, there is no phasing change due to the temporary bus station.

Chapter Topic	Consultee	Scoping Opinion Comment	Response
	LBB	Query in relation to page 19. "a full assessment of the Scheme wide construction impacts was provided in the s73 ES.". It would benefit the ES Further Information Report if it includes an explanation relating to the situation of a CCC site (with the resulting environmental and traffic impacts generated by the site) which has not yet been identified.	Discussions have been undertaken with LBB in relation to the CCC provision and timing of detailed design. Confirmation of a site to take forward for construction usage and detailed design of a CCC is not currently available, however a CCC Feasibility Study has been submitted under the relevant pre-RMA condition 1.19 and further environmental assessment on selected sites will be undertaken when planning approval or change of use is sought (as necessary). This is likely to be undertaken alongside pre-commencement conditions relating to CTMP. Refer to Section 4.8 for further details.
	LBB	Query in relation to page 21 "it is considered appropriate that a Statement of Conformity on traffic and transport will be included". How does this relate to the important modelling work for the A5 Corridor Study which has not yet been completed?	The traffic and transport chapter of the s.73 ES was originally deemed to remain valid and a statement of conformity was proposed. Subsequent to submission of the Scoping Report, it was agreed with the transport modelling team and with LBB that the latest traffic data from the BXC DDM would be included in the air quality and noise modelling assessments which were to be updated for the RMA. The traffic and transport chapter has been updated largely to improve readability and transparency for the reader to reduce technical language regarding transport models and to provide a more appropriate order of information presented. The chapter update has primarily relied on extracting relevant information from the consolidated transport assessment from the section 73 and the latest reserved matters transport report. The chapter also includes an explanation of the latest BXC DDM and how this relates to the previous BXC TM. As such, we believe the chapter will now satisfy the requirements of the local authority and provide a more robust assessment
	LBB	Query in relation to page 36 "The Construction Programme has not changed since the S.73 ES". It is considered that this conflicts the position where the programme appears to have changes in relation to the temporary bus station and CCC.	An updated version of the Indicative Construction Programme (ICP) has not been issued since the s.73 Application. It is not considered that the Temporary Bus Station or CCC (although not part of Phase 1A (North) RMA would alter this.

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Transportation and Access	TfL	Recommended that the Comparator between the base and forecast levels used in different models are provided as part of the submission, at the level of individual links including vehicle types.	A comparison of the TM and DDM are subject to a separate workstream which is currently ongoing. The outcome of this workstream will be made available to the authorities as soon as it is complete.
	TfL	Recommended that TfL's request for data to undertake its own modelling comparison is a separate matter, however they suggest that if this lacking then TfL will be unable to confirm the advice stated in the EIA scope detailed on page 21.	URS have provided the data requested by TfL for comparative purposes.
	TfL	Recommended that the EIA should confirm that the Phase 1A (North) works are being designed with that in mind and set out how, in terms of buses, cyclist, pedestrians and improved public realm on the TLRN and on other roads.	The Integrated Transport Strategy addresses all modes and promotes sustainable travel. The Reserved Matters Transport Report for (Phase 1A (North) (included at Appendix 7.1) presents a summary of the proposals for all modes of sustainable travel, including buses, cyclists, pedestrians and coaches. All sustainable transport proposals support the long term objective to encourage mode shift away from the private car. This is also reflected in Chapter 7 Traffic and Transport .
	TfL	Construction impact should be assessed including impacts in respect of the operation of the bus station/ bus stops/ services, pedestrian, cycling and general traffic movements.	Details of site construction area contained in the Construction Impact Assessment (CIA) Addendum (BXC21) and further detail will be contained within the Construction Logistics Plan (CLP) and CTMP. Construction impacts are considered in this report in respect of Phase 1A (North) where the assessment included in the s.73 ES was considered to require updating as a result of the design details now available or further baseline information (e.g. Noise and Air Quality). Impacts in respect of the operation of the bus station, services, pedestrian, cycling and general traffic movements are considered in Chapter 7 Traffic and Transport .
	LBB	Query in relation to page 21 "Construction Traffic and Phasing is not expected to change...."	As stated above, details of site construction will be contained within the CLP and CTMP. The CIA Addendum in Appendix 2.2 and the ICP contained within the s.73 Application remain valid as per the s.73 ES.
	LBB	Query in relation to page 21 "It is considered appropriate that a Statement of Conformity on traffic and transport will be included"	Based on the analysis of the BXC-TM and BXC-DDM, URS has confirmed that a Statement of Conformity is appropriate for the purposes of this Report since the findings of the s.73 ES remain valid in respect of traffic and transport.
	LBB	Query in relation to page 25 "consideration of whether the traffic data remains valid following the URS modelling and whether the detailed design of Phase 1A (North) features may result in any changes in sensitive receptors or noise sources".	A comparison of the BXC-TM and BXC-DDM are subject to a separate workstream which is currently ongoing. The outcome of this workstream will be made available to the authorities as soon as it is complete. As stated in the Scoping Report forecasts from both models result in the same highway provision and therefore are consistent in their results in traffic terms. The outputs of the BXC-DDM have been considered

Chapter Topic	Consultee	Scoping Opinion Comment	Response
			in the updated noise and air quality modelling which are reported in Chapters 9 and 14 respectively.
	LBB	Query in relation to Section 5.6.2. "Construction traffic numbers associated with Phase 1A (North) RMAs are expected to remain consistent with the S.73 ES"	The construction figures available for consideration remain as per those presented in the s.73. Further details would be available for review in the CTMP at the detailed construction logtics planning stage.
	LBB	Request in relation to section 5.6.2 The planning authority requests confirmation in the ES that no further environmental work is required for the detailed design within Phase 1A (north).	With respect to the proposed highway works, a comparison of the TM and DDM are subject to a separate workstream which is currently ongoing. However, as stated in the scoping report forecasts from both models result in the same highway provision and therefore are consistent in their results. With respect to other modes, there have been no significant changes in the proposed design of Phase 1A (North) since the s.73 application and therefore it is considered that no further environmental works are required.
	Brent	Query in relation to Section 5.6.2. "The baseline and forecast traffic flow numbers are not considered to have changed from 2014 Permission Transport Model such that this would materially affect the finds of the s.73 ES and s.73 TR"	A comparison of the BXC-TM and BXC-DDM are subject to a separate workstream which is currently ongoing. The outcome of this workstream will be made available to the authorities as soon as it is complete.
	Brent	Details regarding the alternative forms of transport do not appear to be fully addressed within the detailed design set out within the Area Wide Walking and Cycling Study and the A5 corridor study. It is therefore not clear how the requirements implicit to the fulfilment of the Scoping Report are being met by the RMA documents.	Information on provision for cyclists, pedestrians, buses, coaches, taxis, freight and servicing is provided within the Phase 1A (North) RMA for the appropriate sub-phase as the detailed design is progressed. The detailed information is provided in the detailed reports specified in the section 106 agreement.
	Brent	It is not clear how the expected increase in bus passengers will be catered for. If the EIA is based on the assumption that modal shift will take place in the long term, it needs to be made clear within the EIA how this is to be achieved.	The s.73 Transport Report presents the outline transport strategy for the Development to cater for the predicted increase in passenger flows and is based on the details contained within the 2014 Permission. The Applicants accept the principle of a subsidy for bus routes and the amount as well as the triggers to release the funding has been agreed as part of the S106 Agreement. The ES Further

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			Information Report does not explore the expected increase in bus passengers since this has not changed from that presented in the s.73 Transport Report.
	Brent	The assessment needs to be made as to how the construction will impact the local residents and how it might be mitigated.	As set out above, the construction traffic volumes presented in the s.73 ES are considered to remain valid. Further details of construction traffic will be provided at the detailed construction planning / logistics stage and will be provided within the CLP and CTMP, which are required by Planning Conditions.
	Brent	Further Information Report should assess the potential impact of parking associated with the development of residential streets surrounding the site.	The charging profile and level of residential car parking provision has been agreed in the 2008 application and again within the s.73 Application. These details therefore form part of the S106. Parking has not been assessed beyond that contained within the s.73 ES as Phase 1A (North) only accounts for minimal car parking at the Clitterhouse Playing Fields and Plots 53 and 54, and both of these areas provide parking in agreement with the S106 of the 2014 Permission. Therefore the potential impacts as previously assessed in the s.73 ES remain valid.
Water Resources and Flood Risk	EA	It is noted that the previous ES findings will be reviewed and updated in light of the detailed designs and further studies on drainage and water resources that have been carried out.	The s.73 ES has been reviewed in light of the detailed designs and further studies on drainage and water resources that have been carried out since the 2014 Permission. However, detailed drainage design drawings are not included within the RMA, as specific design solutions will be dependent upon technical approvals provided by the relevant Highway and Sewerage Authorities.
	Capita	Project partners to discuss adoption/ownership of completed SuDS practices. Given uncertainty regarding the SuDS Approving Body (SAB) framework (pending Defra comment) it is recommended that project partners agree on ownership and maintenance protocols for SuDS practice as early in the planning process to ensure that developers have certainty and confidence for implementing SuDS to the greatest possible extent.	Thames Water, Highways Agency, Transport for London, LBB and the Environment Agency have been consulted to identify the extent of surface water drainage infrastructure that will be maintained by each Authority. Consultation with Thames Water indicates that surface water from new development plots may be discharged to existing adopted surface water sewers, providing that SuDS are provided on plot to improve the quality of runoff and to restrict peak discharge rates to the permissible rates defined within the Thames Water Network Impact Assessment. Thames Water have also indicated that separate highway drainage systems should be provided wherever possible to intercept, attenuate and improve the quality of highway runoff before it is discharged to a watercourse, such as the River Brent or Clitterhouse Stream. Separate highway drainage systems will be provided for each Highway Authority, which will not discharge to one another, in order to ensure that

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			<p>maintenance responsibilities are clearly defined. This approach enables the extent of adopted drainage to be maximised, despite the absence of the SAB framework, in order to maximise opportunities for SuDS and to minimise the extent of private drainage.</p>
	Thames Water	<p>Concerns over the net increase in demand with regards to infrastructure as a result of the proposed development. The main concern is that the network in this area may be unable to support the demand anticipated from this development and the neighbouring developments.</p>	<p>Thames Water have prepared a Network Impact Assessment to identify the potential impact that surface water and foul water that is discharged from the Development could have on the existing adopted sewerage network. This assessment also identifies a series of mitigation measures that are required to prevent detrimental impacts, which include flow controls within the trunk sewer to utilise existing storage more effectively in order to avoid increases in the peak pass forward flow to existing Combined Sewer Overflows. Thames Water have also prepared a Clean Water Hydraulic Modelling Assessment, which considers the additional potable water demand generated by the Development and identifies network reinforcement measures. The Network Impact Assessment and Clean Water Hydraulic Modelling Assessment are not currently available to append to this Report, however they will be submitted along with other water and flood studies completed for the EA Flood Defence Consent process in 2015. The initial outcome of these assessment reports have been considered and incorporated within the Chapter 12 of this Report to demonstrate that the potential impacts of the Phase 1A (North) Development can be mitigated.</p>
	Thames Water	<p>It is unclear how the project will be constructed. There is a concern that water mains and sewers immediately adjacent to the site may be affected by vibration as a result of piling.</p>	<p>Thames Water have indicated through consultation that any new buildings constructed with 3m of an existing public sewer asset will be subject to a Building Over / Close to agreement; therefore, new buildings will be positioned a minimum of 3m from any existing public sewer asset wherever possible. Piling will be designed in accordance with the requirements of Thames Water; firstly, as driven piles will not be proposed within 10m of an existing sewer asset; and secondly, as piles that are proposed to be installed closer than 10m from an existing sewer asset will be drilled/augered and the outside face of the piles will be offset at least 1.5m from outside face of the sewer asset. The piling design will be subject to review as part of the Building Over/Close to agreement and pre and post development CCTV</p>

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			<p>surveys will be provided to check that piling works will not affect the structural integrity of the sewer asset.</p>
	Thames Water	<p>It is recommended that the Environmental Statement should be expanded to consider the impact of all development sites and should include the following:</p> <ul style="list-style-type: none"> - The developments demand for water supply and network infrastructure both on and off site and whether it can be met; -The developments demand for Sewage Treatment and network infrastructure both on and off site and whether it can be met. -The surface water drainage requirements and flood risk of the development both on and off site and whether it can be met; -Any piling methodology and whether it will adversely affect neighbouring utility services. 	<p>Chapter 12 Water Resources and Flood Risk considers potential impacts associated with the supply or potable water, disposal of foul water, management of surface water and installation of piles across the Site with particular detailed information provided for Phase 1A (North) areas.</p> <p>To note the following reports will be submitted separately to the RMAs submission (post-RMA) to the Environment Agency for technical approval:</p> <ul style="list-style-type: none"> - Updated Flood Risk Assessment (FRA); - Geomorphological Assessment; - Welsh Harp Reservoir Impact Assessment; - Updated Water Framework Directive Assessment; - Controlled Waters Risk Assessment - Clitterhouse Playing Fields Drainage Study; - Thames Water Network Impact Assessment.
Contaminated Land	LBB	<p>Concerns over the amount of asbestos being found near to Tilling Road/Claremont Way.</p>	<p>The proposed remediation strategy (as detailed in URS Ground Investigation and Remedial Strategy Report - Tempelhof Bridge and Living Bridge (South Side) Doc no 47065005-GE-RPT-010) is to employ a geo-environmental specialist when earthworks occur to ensure that any significant amounts of asbestos that are found are disposed of to licensed tips and that affected areas have adequate dust suppression, remediation and air monitoring when Asbestos Containing Materials are moved or covered. Comments from the EHO at LBB to URS in an email on 9th October 2014 indicate that this remediation approach is satisfactory. The EHO highlighted the importance of these measures and verification reports and also requested twice monthly updates on progress and problems encountered when the earthworks occur.</p>

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	LBB	Concern regarding the proposed ground investigation of Market Quarter undertaken by URS. There is potential for small pockets of high level methane which arise from domestic refuse tipping which may be found during site remediation. The Delta Symons Report should be referred to in the ES.	Comments received from the EHO at LBB in an email to URS dated 9th October 2014 indicate they would expect higher methane concentrations in the centre of the Claremont Way landfill, not the Phase 1A (North) area which covers the edge of the landfill. LBB's EHO has indicated they would like this confirmed in future Market Square area phase reports which fall outside of the scope of these RMAs.
	LBB	Due to amount of asbestos being reported it is expected that twice monthly updates on progress and problems encountered when earthworks occur.	Agreed. Twice monthly progress reports to be provided to the EHO when the earthworks occur.
	LBB	Due to the potential risk of contaminated groundwater affecting the realigned River Brent, the EHO and EA expects twice monthly progress reports.	Agreed. Twice monthly progress reports to be provided to the EHO when the earthworks occur and the EA is to be regularly consulted
	EA	The additional site investigation work and monitoring carried out in 2014 to inform the development proposals should be presented in the ES for review.	Agreed, see Appendix 15.2 .
Noise and Vibration	LBB	Query in relation to page 25- Noise and Vibration: Changes to the sensitive receptors as a result of updated traffic modelling. Need to reconsider any assessments where this information is available.	As mentioned within Section 4.7 the noise and air quality chapters (Chapters 9 and 14 respectively) have been updated to incorporate traffic data from the BXC-DDM and the detailed design highways layout. As such impacts and mitigation have been updated from that presented in the s.73 ES.
	TfL	TfL raised design concerns with the proposed acoustic screen along the A406. TfL has previously indicated that the proposals as understood at that time represent a road safety hazard and potential maintenance liability. TfL suggests before the Environmental Statement is submitted that TfL concerns should be answered.	Details of the acoustic barrier along the A406 will be submitted for approval under the appropriate Planning Condition, rather than the Phase 1A (North) RMA. A proposed location and height for the barrier has been included in the highways model and assessed within Chapter 9 Noise and Vibration .

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Air Quality and Dust	LBB	Concern has been expressed regarding future predictions relating to the new rail freight facility, specifically that the amount of freight trains may increase and affect existing housing. A vibration reassessment will be necessary if there are to be increases in numbers of freight trains on the Cricklewood curve.	The Phase 1A (North) RMA does not contain details of the proposed new rail freight facility which is due for delivery in a later development phase. As such, it has been deemed unnecessary to update the noise and vibration monitoring at this location and nearby residences as it is not a feature of the Phase 1A (North) RMAs. The site-wide noise results as updated for the latest traffic data accounts for the railway noise (as per the s.73 ES) but does not provide further detail on the rail freight facility and potential mitigation. This would be assessed in further detail and further monitoring for noise and vibration in the locality of the rail tracks and rail freight facility would be undertaken in respect of the RMAs for the relevant sub-phase for the rail freight facility and/or nearby development zones.
	LBB	Request in relation to section 5.8.2. If any changes to the temporary bus station location, in particular increasing bus facilities in proximity to the residential properties on Layfield Close, this should be taken in to account within the noise chapter.	The Temporary Bus Station and Bus Stops at Plot 113 have been assessed and modelled to determine the potential noise impacts on residents at Layfield Close, Brent Park Road and near Sturgess Park. Traffic data based on the proposed bus movements and operational hours has been provided by URS to input to this assessment. Outcomes of the temporary bus station assessment are included in Chapter 14 Air Quality and Dust and Chapter 9 Noise and Vibration .
	LBB	Section 5.13.1-5.13.3 within the scoping report are generally adequate but will need additional data to be provided in the forthcoming ES.	Additional air quality data is provided in Chapter 14 Air Quality and Dust based on the updated dispersion modelling, baseline monitoring undertaken in 2014 and detailed design of Phase 1A (North).
	LBB	LBB Air Quality Monitoring data for 2013 should be incorporated into the Environmental Statement.	Use of 2013 monitoring data from LBB was considered initially, however as the baseline traffic data provided for modelling purposes is for 2012, it was deemed more appropriate and consistent to apply LBB and LB Brent monitoring data from the corresponding year. Waterman completed on-site diffusion tube monitoring for NO ₂ for three months of 2014, the results of which have been reported in Chapter 14 and have been used within the dispersion modelling.
	LBB	The London Atmospheric Emissions Inventory (LAEI) should be used for the Air Quality Assessment.	The LAEI is compiled by the Greater London Authority (GLA) and comprises emissions from all sources within Greater London, including transport (road, rail, airport, shipping) industrial (stacks) and various other sources. It does not provide estimates of future concentrations, so if used, it would require individual modelling for the dispersion of all relevant emissions within our study area, which is not considered to be reasonable and is not part of standard methodology for air quality assessments. Instead, road traffic emissions have been added to which the contributions of any other sources have been added via the Defra background

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			<p>pollution maps, which include the contribution of industry/airport/domestic sources, as pollutant concentrations.</p> <p>Moreover, the LAEI only provides data for a baseline year (2010) and projections/estimates for future years (2012, 2015 and 2020) – so could not have been used for the future Do-Minimum/Do-Something 2031 scenarios – contrary to our methodology, which uses estimated traffic data, emission rates, and background pollutant concentrations for year 2031. Also to note, the example of the Edmonton Incinerator given by LBB is not relevant for the air quality assessment, as this source is about 13km east of Brent Cross and therefore its contribution is likely to be negligible.</p>
Waste	EA	Useful to understand potential changes to the scheme in relation to waste management and particular the use of refuse-derived fuel.	<p>As stated within the EIA Scoping Report, the waste calculations have not been updated for the purposes of this RMA as there is no change in the overall floorspace of the development and therefore energy demand/usage and the construction footprint remains the same as per the 2014 Permission. The waste volumes and management measures as reported in the s.73 ES therefore remain valid. A Demolition and Site Waste Management Plan will be completed to satisfy pre-commencement conditions.</p> <p>Section 4.8 of this Report provides an update on the outcome of the refuse derived fuel feasibility studies (pre-RMA conditions) and the recently submitted Revised Energy Strategy. There is not however detailed information available at this stage to include an updated energy assessment within this Report or details on the waste handling facility, and as such this would follow in subsequent sub-phase RMAs within which the energy centre and waste handling facility lie.</p>
Ecology	EA	It is expected the that the final details around types of planting, monitoring and maintenance regimes to come forward through condition 27.9 in the Landscape and Ecology Management Plan for this phase.	<p>LEMPs have been produced for each open space area by the landscape architects, this includes one for Clitterhouse Playing Fields Improvements Part 1, Claremont Park and Central Brent Riverside Park. The LEMP documents include planting strategies with recommended species mix, planting regime and ongoing monitoring and maintenance. These documents have been reviewed as part of the preparation of this Report and Waterman's ecologists have also provided input to these documents.</p>

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Capita		Additional bat surveys are to be undertaken in 2015 prior to commencement of construction. If the baseline should change and new bat roosts found, appropriate mitigation measures and liaison with Natural England will be required.	<p>The 2014 bat survey results for Phase 1A (North) (structure roost potential and activity surveys) are considered valid until 2016 for the Phase 1A (North) area. Baseline surveys are therefore not considered necessary in 2015 for Phase 1A (North) areas of the Site unless the design changes significantly such that new areas previously not surveyed could be affected.</p> <p>A number of trees to be removed in Phase 1A (North) are recommended for pre-felling checks directly prior to felling, to be carried out under the supervision of a licensed bat worker. This is expected to be required in 2016 prior to construction works commencing, however if construction and site preparation works go beyond 2016, updated and/or validation surveys will be required for the Phase 1A (North) area to updated the habitat survey and associated bat surveys. In addition, any structures to be impacted in future phases that have been highlighted in the 2014 bat surveys as having bat roost potential will be surveyed during the bat activity survey season (May - August inclusive) in the year prior to works commencing, therefore ensuring the most recent data is available to advise on mitigation measures and/or to allow time for liaison with Natural England and to apply for a bat licence if required.</p>
Capita		Aquatic ecology survey of the River Brent is to be undertaken and appropriate mitigation measures developed and protected species recorded.	<p>An 'aquatic ecology survey' was proposed by URS in the s.73 ES Water Resources and Flood Risk Chapter however upon review in 2014 it was not deemed appropriate to conduct an aquatic ecology survey in this area of the River Brent due to a review of existing aquatic ecology (fish and invertebrate) data obtained from the Environment Agency.</p> <p>The results concluded that no protected or notable species have been recorded by the EA from adjacent watercourses at EA monitoring stations in the last 10 years. These results were supported by the updated ecological appraisal undertaken in 2014 by Waterman as provided in Appendix 11.1, which reported low ecological value at the existing river channel. As such, there is deemed no requirement to undertake an aquatic ecology survey in the River Brent.</p>
Capita		If the duration between the 2014 Phase 1 Habitat Survey and the commencement of works exceeds 2 years then further update/validation Phase 1 Habitat Survey should be considered to capture any changes in baseline.	Noted.

Chapter Topic	Consultee	Scoping Opinion Comment	Response
	TfL	TfL requests that impact on TfL owned green estate/trees included in the Phase 1A (North) is commented upon and assessed.	All trees and their condition within the Site are detailed in the tree survey undertaken by Haydens as submitted for Planning Condition 27.1 and the Tree retention and Removal plans as included in the RMA submission. Root protection measures have been recommended such as Root Protection Areas under Condition 27.2.
Archaeology	EH	GLAAS disagree with the proposed field evaluation of the Childs Hill Archaeology Priority Area and instead consider that it would be appropriate to undertake the proposed field evaluation as an integral part of the reserved matters EIA.	Following further consultation with GLAAS following receipt of the EIA Scoping Opinion the Applicant agreed to undertake a geophysical survey at the Childs Hill area prior to RMA submission. Results from the geophysical survey are reported in the Phase 1A (North) Archaeology WSI (Appendix 13.3 and Chapter 13 Archaeology and Cultural Heritage). It was agreed that further field evaluation such as trial trenching (as required) would then be undertaken subsequent to the submission of the Phase 1A (North) RMAs with results provided at the end of the evaluation works to GLAAS. Consultation with GLAAS and agreement on field evaluation locations and methodology will be ongoing.
Landscape	Capita	Expect inclusion of a landscape and visual impact of the plots 53 and 54 and the temporary works within the ES Further Information Report for Phase 1A (North).	The updated townscape and visual impact assessment (Chapter 10 includes two new viewpoints on Brent Terrace including Plots 53 and 54, whilst three new viewpoints have been included to capture the Temporary Bus Station and bus stops at Plot 113.
Microclimate	Capita	With regards to wind microclimate, the proposed scope is not clear if interim site conditions upon completion of Phase 1A and in advance of masterplan completion, will be tested. Section 5.19 appears to suggest this may be limited to a qualitative statement of conformity.	The wind microclimate assessment includes a modelled scenario for interim site conditions which exist once Phase 1A (North) elements are constructed but prior to the remaining scheme being built. The results of this wind tunnel test is provided within this Report in Chapter 20: Intermediate Years Assessment and Appendix 17A.1 .
	Capita	The Living Bridge was not assessed as an amenity space in the s.73 ES. Given the extension of recreation uses along the southern approach, there is potential for overshadowing from neighbouring blocks (Phase 1B) to impact on amenity spaces. It is	The Living Bridge has been included in the assessment of wind and overshadowing, as reported in Chapter 17A and B in this Report. The amenity value of the Living Bridge has been considered to ensure that short term sitting comfort levels are provided for wind speeds with an aim to reach long term sitting levels once the Development as a whole is built out.

Chapter Topic	Consultee	Scoping Opinion Comment	Response
		<p>recommended that this be assessed. If dense evergreen trees are proposed as wind mitigation, these should be included within the overshadowing assessment.</p>	<p>Overshadowing of amenity areas would be further considered once the details of the adjacent development phases are known, the first of which will be Phase 1B (North).</p> <p>It is not considered likely that the overshadowing would result in any significant impacts to the amenity spaces within the Phase 1A (North) elements, based on the findings of the s.73 ES, however it is recommended that the amenity space on the Living Bridge is assessed for overshadowing with the detailed design of the Phase 1B (North) and subsequent development plots at their RMA submission stage. This is something that would be agreed at the scoping stage of the next RMA.</p> <p>In relation to the evergreen trees and the impact on shading, the s.73 ES included an assessment of sunlight availability to amenity areas via the production of detailed shadow plots from 09.00 to 16.00 on 21st March for both baseline conditions and for the proposed development. As such, the amenity areas including the Living Bridge were previously assessed and shown to be adequately sunlit on 21st March. The detailed landscaping plans in Phase 1A (North) for the Living Bridge include a mixture of tree species, the majority of which are relatively small in height and include some evergreen and some deciduous. As such it is not considered likely that the proposed planting would alter the sunlight values reported in the s.73 which are considered to remain valid.</p>
CO2	Capita	<p>Ensure the CEMP includes measures that will reduce CO2 emissions during the construction phase of the scheme. Meet with the designers to ensure that such measures could include: external wall rendering and roof insulation for increased energy efficiency, green and blue space/roofs to reduce urban heat island effect and cool buildings in summer, solar shading and smaller windows to cool building in the summer and south facing roof tops for uptake fo solar panels.</p>	<p>Noted. The CEMP will be produced pre-commencement as per the planning condition requirement of the 2014 Permission.</p>

Chapter Topic	Consultee	Scoping Opinion Comment	Response
	Capita	<p>The assessment reports that the s.73 development will reduce CO2 emission 2.3% by 2026 due to reducing trend in vehicle CO2 emissions. We recommend that assessment needs to be re-done using methodology as shown below to identify more likely change in CO2 emissions as DMRB predicts much greater reduction in emissions than what has been seen.</p>	<p>Please see response below in relation to modelling methodology.</p> <p>To note, the s.73 ES Chapter 19 shows that CO₂ emission contributions from transport are very minimal when compared to emissions due to buildings (construction related and energy consumption), therefore it is not considered appropriate at this stage of the RMA process to update the CO₂ emission calculations for the whole Development when only operational transport data has been updated whilst the majority of development plots and the site wide energy strategy remain without detailed design.</p> <p>The updated transport data from the BXC DDM as applied to Chapter 14 Air Quality and Dust and Chapter 9 Noise and Vibration, has been reviewed and tested against the BXC TM by the project transport team who have confirmed the data is comparable and therefore no significant changes would be expected from recalculating the transport emissions.</p> <p>In relation to the use of DMRB, Waterman’s air quality team have compared the CO₂ emission estimates from this tool against the Emissions Inventory and have found the DMRB to be more conservative and therefore likely to be predicting slightly higher CO₂ emission rather than ‘much greater reduction in emissions’ than may be expected from the Development. We would therefore welcome further discussion with Capita on the use of CO₂ emission calculations at future RMA phases when a full update can be complete with energy centre and development plot details.</p>

Chapter Topic	Consultee	Scoping Opinion Comment	Response
	Capita	<p>The proposed assessment uses the Highways Agency's Design Manual for Roads and Bridges (DMRB) assessment methodology to assess CO₂ emissions from transport. This methodology relies on vehicle emission rates from 2007 and is out of date. The assessment is likely to result in a significant under-estimation of CO₂ emissions resulting from traffic associated with the development.</p> <p>A more robust methodology using the ADMS Roads Dispersion Model (air quality model that should already be built) or EMIT Emission Inventory or Traffic emissions modelling (e.g. AIRE) should be conducted that employs with up to date CO₂ vehicle emissions rates supplied by Defra.</p>	<p>In our view using the ADMS-Roads model would not allow us to calculate CO₂ emissions, as this model uses emissions as input to calculate concentrations at specific receptors, following dispersion in the atmosphere. Moreover, although we have used ADMS-Roads to model the impact of road traffic on other pollutants (NO₂ and PM), the road network considered (a few hundred road links) is much smaller than the network that needs to be considered for the calculation of CO₂ emissions (likely > 20,000 road links, considering the Perimeter Cordon used in the s.73 ES - see Figure 2.2 "BXC Model Cordon" in BXC05 – BXC TA Volume 2 Appendix III (F)). EMIT could be used, however we do not currently have access to this model. If any tool was to be used instead of the DMRB tool to predict CO₂ emissions, we would recommend use of the latest Emissions Factors Toolkit (EFT) published by Defra in November 2014, as this is based on the latest road-traffic emission factors.</p> <p>Although we agree that the "DMRB Regional Impact Assessment" excel tool used in the s.73 ES to calculate changes in CO₂ emissions from road traffic is based on outdated emission factors, it does not mean that results would under-estimate CO₂ emissions.</p> <p>Actually, following the completion of sensitivity tests for a number of typical road types and vehicles speeds it indicates that estimated CO₂ emissions using DMRB tend to be notably higher (>10%) than those calculated by the EFT for the same year, road type, and speed (for typical urban speeds within 20-50km/hr), and significantly higher (>25%) on typical motorways (considering a speed of 100km/hr), although DMRB provides slightly lower results than the EFT at very low speeds (10km/hr and less). This indicates that results presented in the s.73 ES are likely to be overly conservative, in addition to the DMRB only allowing calculation of emissions up to 2025, whilst the EFT goes up to 2030 (projected emissions in 2030 are lower than in 2025 - and our year of assessment is 2031).</p>

Chapter Topic	Consultee	Scoping Opinion Comment	Response
Cumulative	Brent	The assessment should include the cumulative effect of the development with other relevant existing or proposed development in the area.	This has been addressed within Chapter 21 Cumulative Effects with the retention of those cumulative schemes from the s.73 which still have approval but have not been built out, whilst additional schemes in the vicinity of the Development have been identified in agreement with LBB and include Brent and Camden schemes from the latest review of the Planning Portal.
	LBB	<p>The assessment should also include the cumulative effect of the development with other relevant existing or proposed development in the area.....although, the list submitted in Table 8 includes developments we have previously advised on, the list has excluded some we have identified and... others for inclusion.</p> <ul style="list-style-type: none"> • Allianz Park • The former Colindale Hospital • Zenith House • British Library Newspapers • Former Wickes, Mercedes Benz site, Colindale 	Those schemes from this list which have planning approval or have recently been submitted, but excluding those which are built out, have been included in our cumulative assessment and are listed in Chapter 21 .

4.5 Planning Conditions and EIA

Pre-RMA Planning Conditions

- 4.5.1 As part of the EIA Scoping Study, Waterman undertook a full review of relevant planning conditions of the 2014 Permission and specifically of the material required to discharge a number of planning conditions prior to the submission of the RMAs. These planning conditions are known as ‘**Pre-RMA Conditions**’.
- 4.5.2 The review was undertaken to establish whether any of the Pre-RMA Conditions require further environmental information for the purposes of decision making. The full review of Pre-RMA Conditions is provided in **Appendix A of Appendix 4.1 EIA Scoping Report**. This review concluded that the applications under the conditions are not considered to give rise to significant environmental effects which were not identified in the s.73 ES and other associated environmental information and therefore no further environmental information is required. This is largely due to the condition reports relating to matters which are not relevant to environmental impacts or they provide feasibility studies which set out options which could be taken forward but the detailed design of which is not available for this sub-phase RMA.
- 4.5.3 The Pre-RMA Condition review presented in Appendix A of the Scoping Report concluded that there was only one condition which was identified as having the potential need for further environmental information. This was Planning Condition 35.6: Revised Energy Strategy of the 2014 Permission which follows on from Planning Condition 35.3: Refuse Derived Fuel (RDF) Feasibility Study of the 2014 Permission if the outcome of the latter condition is that RDF is not a viable option for the energy centre on Site. As such, this was the outcome of the RDF Feasibility Study and therefore a Revised Energy Strategy (RES) was required to be produced to satisfy Condition 35.6. The RES provides alternative fuel and energy centre options for the Development which may then be taken forward in the relevant phase or sub-phase RMA within which they are located. Selection of a particular fuel type and energy centre details for a site-wide option(s) are not included within the Phase 1A (North) RMAs, as such this will be considered at a subsequent phase within which the centre(s) lie. However, to note a small gas-fired CHP will be located within Plot 53 which will provide Plots 53 and 54 with an independent energy and heating supply. A description of this plant is included in **Chapter 2** and emission details are discussed in **Chapter 14: Air Quality and Dust**. This is anticipated to be Phase 1B (North) in 2015 where further environmental information in respect of the RES would be provided as necessary.
- 4.5.4 Further detail with regard to the approach to Energy Strategy and Construction Consolidation Centre (CCC) is provided in **Section 4.8**.

Pre-Commencement Planning Conditions

- 4.5.5 There are a number of planning conditions of the 2014 Permission which require details to be submitted and approved in advance of works commencing. Due to their environmental focus, reports in response to the following planning conditions were prepared and have been incorporated in this ES Further Information Report:
- **Condition 34.4: River Brent Shading Study** - Chapter 17B: Microclimate (Daylight, Sunlight and Overshadowing);
 - **Condition 34.1: Wind Assessment of Amenity Levels for Pedestrian Routes** – Chapter 17A: Microclimate (Wind); and

- **Condition 43.1: Written Scheme of Archaeological Investigation** - Chapter 13: Archaeology and Cultural Heritage.

4.5.6 Technical reports for the above are appended to this Report to discharge fully or partially the planning conditions. The early preparation and submission of other Pre-Commencement Conditions have also been undertaken in 2014 and as such these reports have been reviewed and outcomes considered within this report where these are applicable.

Planning Condition 4.2 – Phasing Change

4.5.7 The development at Plots 53 and 54 has been brought forward from sub-phase 1C to 1A (North) in order to provide new homes for the displaced residents from Whitefield Estate which is required for demolition to enable the construction of the Living Bridge within this first sub-phase. Through the detailed design of Plots 53 and 54 several housing mixes have been considered and presented to LBB. As the design has neared completion and in considering all factors such as distance from and setting with existing surrounding properties, houses versus unit numbers, access requirements and internal space, it has been determined that 47 units will be taken forward on these plots for this RMA.

4.5.8 Planning Condition 4.2 of the 2014 Permission allows for amendments to the phasing plans provided certain information is provided to demonstrate any changes are *‘unlikely to have significant adverse environmental effects compared to the assessments contained in the EIA Process unless and to the extent that such changes are validly approved by the LPA after they have been assessed by a subsequent new or revised ES’*. Waterman reviewed the EIA implications in relation to the sub-phasing change for submission to LBB and confirmed that the s.73 ES remained valid. This review is provided in **Appendix 4.3**.

Planning Condition 2.5 – Deviations from the 2014 Permission

4.5.9 For the most part, the detailed design of infrastructure, open space and Plots 53 and 54 are in accordance with the parameter plans approved under the 2014 Permission. However, as the design process has progressed it has been necessary in some instances to make minor deviations from the approved parameter plans. A schedule of the deviations from the 2014 Permission is provided below in **Table 4.2** (the **‘Deviations’**).

Table 4.2: Deviations from the 2014 Permission

Deviation Number	Deviation Description
Clitterhouse Playing Fields	
1	The synthetic turf pitches to the south west of the playing fields within the RDSF are now six proposed tennis / Multi Use Games Area (MUGA) courts. These courts will go slightly beyond the level of deviation (L.O.D) (-/+ 20m) identified on Parameter Plan 012 in the RDSF.
2	The natural grass playing fields to the north east of the playing fields identified on Parameter Plan 012 will now provide for community play space. The area of grass playing pitches will still comply with the requirement of the Section 106 Agreement to provide 6.23ha of sports pitches.
3	The car parking zone was previously identified adjacent to the maintenance store and office. Following discussions with LBB it has been agreed to position the car parking zone to the east of the former Hendon Football Club. In this agreed location it will exceed the identified L.O.D as reflected in the revised Parameter Plan 012.

Deviation Number	Deviation Description
4	Through design development with LBB, ground levels in the south east of the sports pitches will be altered to meet Sport England compliant gradients. This will result in a slight deviation from the AOD levels show on Parameter Plan 012 (46m AOD to 47m AOD).
5	The farm buildings are currently identified for demolition on Parameter Plan 012, however as indicated in Schedule 28 of the S106 Agreement and through community consultation, the buildings are proposed to be retained and used for maintenance storage/office and car parking. The maintenance store in part of the farm buildings will be included in Phase 1A (North) within the Clitterhouse Playing Fields Improvements Part 1, whilst the remainder of the refurbishment will be included in Part 2 improvements by the Southern Developer. Parameter Plans 012 and 016 have been updated to reflect this.
6	Play facilities previously located to the north of the former Hendon Football Club have been relocated following discussions with LBB, to the east of the former football grounds as updated in Parameter Plan 012.

Claremont Park

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| 7 | Road level deviation at Claremont Park (east) beyond the L.O.D identified on Parameter Plan 006 in the RDSF. The road level changes have resulted from the development of the detailed road layout and identification that in order to achieve a uniform gradient from the Claremont Road junction in the east to the proposed Spine Road junction in the west, it will be necessary to marginally increase the proposed level at the western end of the Claremont Park Road. As such, the Claremont Park Road will increase from 48.00 to 49.51m AOD (an increase above the L.O.D. of 0.51m). This also facilitates a Disability Discrimination Act (DDA) compliant access gradient to Claremont Park and connecting to Brent Terrace. |
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River Brent Bridges

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| 8 | Change of height upper limit in the RDSF of the four vehicular bridges across the central section of the River Brent and pedestrian and cyclist only bridges across the western section to accommodate the detailed design of the final highways layout including the western roundabout. The amended parameters are underlined as follows: <i>'pedestrian and cycle bridges will have length, width and height parameters of 15-30m, 4-8m and 600 – <u>2,600mm</u> above the 1 in 100 year plus climate change flood level.....The vehicular bridges will have a length, width and height thresholds of 20-48m, 8-<u>37m</u> and 600 – <u>3,600mm</u> above the 1 in 100 year plus climate change flood level.'</i> |
| 9 | Update of Parameter Plan 011 as three of the bridges require amendments in approximate level of crossing points as an outcome of detailed design. River bridge 2 changes from 42.5 to 43m, bridge 9 changes from 43 to 43.5m and the western pedestrian bridge changes from 40.5 to 41m. |

Nature Parks 4 and 5 (NP4 & 5)

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| 9 | Alterations to the layout of the Western roundabout within the Brent Cross Shopping Centre car parks includes a new signalised roadway through the western internal roundabout which links to the Templehof Bridge. This roadway is to be delivered as an embankment structure; cutting through an area previously defined in the 2014 Permission as Nature Park 5 (NP5) as shown on Parameter plan 003. In order to accommodate this road alteration, the area of NP5 will be reduced from 0.2ha to 0.12ha, a loss of 0.08ha. This is to be relocated to NP4 to the west of the River Brent corridor adjacent to the M1/A406 junction. NP4 will therefore increase in area from 0.3ha to 0.38ha.

As a result of the changes outlined above, Section A2.6 of the DAS will need amending to give the Nature Parks area ranging from 0.1-0.5ha to replace the former 0.2-0.5ha. |
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Floorspace for Plots 53 and 54

Deviation Number	Deviation Description
10	<p>Tables 11, 11a and 11b of the RDSF has been updated under Condition 4.2 to reflect the movement of plots 53 and 54 from Phase 1C to Phase 1A (North).</p> <p>The floorspace for the Primary Development Package (PDP) under residential (Class C3) in Table 11 changes from 4,182m² (36 units) to 5,575m² (up to 60 units) within the Brent Terrace Development Zone. This floorspace is applied to Plots 53 and 54 with the delivery of 47 units up to this floorspace area.</p> <p>Table 11a residential (Class C3) floorspace during the PDP across all Development Zones increases from 171,150m² to 172,543m², whilst the total residential floorspace from Brent Terrace Post PDP decreases from 190,976m² to 189,583m². Therefore the overall total floorspace does not change.</p> <p>Table 11b has a slight amendment to insert Plots 53 and 54 under Sub Phase 1A and removes these from Sub Phase 1C.</p>
Sub Phase 1 Plans	
11	<p>In October 2014 a submission was made under Condition 4.2 to amend the phasing plans to bring Plots 53 and 54 into Phase 1A (North). Updated indicative Sub Phase 1 Plans were submitted alongside an explanatory report in October 2014.</p>

4.5.10 These Deviations have been subject to review by Waterman and the EIA technical specialists as part of a submission under Planning Condition 2.4 and 2.5 of the 2014 Permission. This review identified whether they are likely to result in significant effects not identified in the s.73 ES or whether the effects are likely to differ from those identified in the s.73 ES. Whilst this review concluded that the majority of the Deviations have no material consequence to the findings of the s.73 ES and require no further consideration, a few of the Deviations have been considered further within this ES Further Information Report since they form the detailed design:

- The retention and refurbishment of Clitterhouse Farm Buildings will require consideration within the archaeology, landscape and visual impact assessment (LVIA) and the ecology chapters;
- Changes to the western and eastern roundabouts in regard to maximum heights on the southern side will be considered throughout this Report when assessing the latest highways infrastructure proposals;
- Change of sub-phase for plots 53 and 54 has been considered both in Condition 4.2 of the 2014 Permission and further information is provided within the socio-economic chapter of this Report.
- All minor deviations have been considered by the technical consultants in their review and assessment of the Phase 1A (North) RMAs since they are now inherent in the Scheme's detailed design.

4.6 General Approach

4.6.1 In order to assess the need for 'further environmental information' a full review has been undertaken by the EIA technical specialists of the detailed design proposals for the Phase 1A (North) RMAs to determine the outcome of the following questions (as outlined in the Scoping Report):

- a) Are the baseline conditions likely to have changed significantly since the information provided in the s.73 ES, such that the changes could materially affect the findings of the previous assessment?
- b) Does the detailed design lead to likely significant environmental effects which differ from those reported in the s.73 ES, or effects which were not identified (or identifiable) in the s.73 ES?

- c) Is further environmental information considered necessary to inform decision making, over and above that provided in the s.73 ES?

If the answer to c) is No, a 'statement of conformity' is provided setting out why the s.73 ES remains valid for decision making.

If the answer to c) is Yes, further environmental information is presented in this report and necessary updates to the impact assessment from the s.73 ES are provided.

- 4.6.2 It should be noted that where further information is presented within this report to inform decision making, it does not necessarily follow that the significant effects reported in the s.73 ES change as in some instances the further information relates to updated information such as baseline being presented.

- 4.6.3 The structure of each technical chapter of the Report is as follows and some further explanation of the approach to certain sections is provided below:

- **Introduction:** description of the approach to the topic, i.e. statement of conformity or further assessment, author and relevant supporting information (e.g. Appendices);
- **Policy, Legislation and Guidance:** brief description of key changes since the s.73 ES of relevance to the assessment;
- **Relevant Phase 1A (North) RMAs Details:** brief description of the detailed design elements of Phase 1A (North) RMAs of relevance to the technical assessment;
- **Assessment Methodology:** description of significant changes in the methodology and / or significance criteria since the s.73. The approach to the Statement of Conformity / further assessment work is also set out;
- **Consultation:** summary of the Scoping Opinion relevant to the technical assessment and details of consultation relevant to the assessment topic;
- **Baseline Conditions:** Description of significant changes in baseline conditions since the s.73 ES was prepared and/or explanation of why the baseline remains valid;
- **Assessment and Mitigation (Construction and Operation):** States why the s.73 ES assessment and mitigation measures remain valid or where further assessment has been undertaken. Any significant new or different environmental impacts from those identified in the s.73 ES are presented and comment is made on the s.73 ES mitigation measures to confirm if they remain valid; and
- **Summary:** This section confirms whether the detailed design of the Phase 1A (North) RMAs result in a material change to the findings of the s.73 ES or whether it remains valid for decision making. A summary table of any new or different potential impacts, mitigation and residual impacts is provided.

Legislation, Policy and Guidance

- 4.6.4 Since the s.73 ES was submitted a number of policy and guidance documents have been updated. It should be noted that the content of these documents does not materially affect the findings and conclusions of the EIA technical assessments. However, where policy and guidance has been published since the s.73 ES, commentary is provided in each Chapter on the relevant changes.

Assessment Methodology

- 4.6.5 Overall the definition of the likely significant environmental impacts is, as far as possible, as per the approach used in s.73 ES, however were necessary this has been updated or included in this Report for

specific technical assessments taking into account current guidance / standards. All Chapters state potential impacts and residual impacts in bold text for ease of reference.

- 4.6.6 The significance of impacts used in each Chapter presenting further assessment is evaluated with reference to definitive standards, accepted criteria and legislation where available. The approach and methodology applied in the s.73 ES has been applied wherever possible. Where it has not been possible to quantify impacts, qualitative assessments have been carried out, based on expert knowledge and professional judgment. Where uncertainty exists, this has been noted in the relevant Chapter.
- 4.6.7 Where criteria are not contained within the s.73 ES Chapters, or these criteria required updating, the approach below has been followed for each potential impact, giving due regard to the following:
- Extent and magnitude of the impact;
 - Impact duration (whether short, medium or long-term);
 - Impact nature (whether direct or indirect, reversible or irreversible);
 - Whether the impact occurs in isolation, is cumulative or interactive;
 - Performance against environmental quality standards
 - Sensitivity of the receptor; and
 - Compatibility with environmental policies.
- 4.6.8 In order to provide a consistent approach to the treatment of different technical issues, the following terminology has been used in this Report to define impacts:
- Adverse - Detrimental or negative impacts to an environmental/socio-economic resource or receptor;
 - Negligible - Imperceptible impacts to an environmental/socio-economic resource or receptor; and
 - Beneficial - Advantageous or positive impact to an environmental /socio-economic resource or receptor.
- 4.6.9 Where adverse or beneficial impacts have been identified these have been assessed against the following scale;
- Minor - slight, very short or highly localised effect;
 - Moderate - limited effect (by extent, duration or magnitude) which may be considered significant; and
 - Major - considerable effect (by extent, duration or magnitude) of more than local significance or in breach of recognised acceptability, legislation, policy or standards.
- 4.6.10 Broadly, short to medium-term impacts are considered to be those associated with the site preparation and construction phase and long-term impacts are those associated with the completed Development. Local impacts are those affecting the Site and neighbouring receptors, while impacts upon receptors in the LBB and neighbouring Boroughs are considered to be at a local / district level. Impacts affecting Greater London are considered to be at a regional level, whilst impacts which affect different parts of the country, or England as a whole, are considered to be at a national level.
- 4.6.11 Each technical Chapter of the Report provides further explanation and definition on the scale of impact significance i.e. minor through to major, relevant to their topic.

Baseline Conditions

- 4.6.12 The environmental effects for each technical topic are considered by comparing baseline environmental conditions (i.e. the existing condition without the Development in place) with the conditions that would

prevail were the Development (as a whole) to be constructed and occupied. If significant changes to the baseline conditions of the Site or surroundings have taken place since that reported in the s.73 ES, it may mean that the assessments previously reported are no longer valid. Consideration is therefore given to whether baseline conditions have changed from those reported in the s.73 ES for each technical topic.

- 4.6.13 Baseline conditions have been reviewed for each technical topic to confirm whether they remain valid as per the s.73 ES. For the majority of technical assessments this has taken the form of a desk based review initially to check the scope (spatial and temporal) of the baseline data within the s.73 ES and where information is deemed to no longer remain valid such as due to the age of the data, further assessment such as surveys or monitoring have been undertaken. In instances where baseline has been identified as requiring updates, the need and method of updating the baseline has been agreed as necessary with the relevant parties.
- 4.6.14 As part of the RES 2008 (as amended in 2009), the baseline year for all normal 'physical effects' was mostly taken as 2006 and 2007 when surveys were undertaken. There was no attempt to factor this forward to the application year on the basis that the existing environment would be unlikely to change to any significant degree in the absence of the Scheme. Where environmental assessments were updated in the s.73 ES to reflect the proposed amendments to the Scheme, the baseline conditions were reviewed and where necessary updated information was presented in the s.73 ES.
- 4.6.15 Baseline information has been updated where necessary for the following Chapters and the following data years form the basis of the impact assessment Chapter:
- **Chapter 9: Noise and Vibration:** Updated baseline monitoring for Clitterhouse Playing Fields and Plots 53 and 54 undertaken in 2014, remaining baseline monitoring for the Site is from 2006 and 2007;
 - **Chapter 10: Townscape and Visual Impact Assessment:** Baseline updated in 2014 for this RMA. The baseline from 2008 ES was previously used within the s.73 ES;
 - **Chapter 11: Ecology and Nature Conservation:** Baseline updated in 2014 for this RMA;
 - **Chapter 13: Archaeology and Cultural Heritage:** Baseline updated in 2014 for this RMA using information obtained for the Written Scheme of Investigations; and
 - **Chapter 14: Air Quality and Dust:** Updated baseline monitoring undertaken for the Site in 2014 using nitrogen dioxide diffusion tubes. Updated background data obtained from continuous monitoring stations around the Site (2006-2012 data used within the s.73 ES). Traffic data for the noise modelling is from 2012 survey data and therefore 2012 will be used as the base year for the existing 'Do Minimum' scenario.

Potential Impacts

- 4.6.16 Potential impacts are defined as those identified impacts which could result from the Development within the existing environmental setting and in the absence of mitigation measures.
- 4.6.17 Potential impacts are only included in Chapters where environmental impacts have been identified which differ from those presented in the s.73 ES, for example if the baseline has been updated or if the detailed design would result in new or different impacts from those identified in the s.73 ES.
- 4.6.18 For Chapters presenting full updates from the s.73 ES, a complete impact assessment is provided in this Report including potential impacts, mitigation and residual impacts for all identified receptors.

Mitigation Measures

- 4.6.19 Comment is only provided on mitigation measures where they differ from those presented in the s.73 ES. This may be in relation to a new or different potential impact identified as a result of updated baseline, detailed design information, or further assessment.
- 4.6.20 For Chapters presenting full updates from the s.73 ES, a comprehensive list of mitigation measures applicable to that technical assessment with a focus on the Phase 1A (North) RMAs elements and areas of the Site is provided within the summary section at the end of the assessment.
- 4.6.21 Inherent mitigation which has been incorporated into the detailed design of the Development is not considered within this section.

Residual Impacts

- 4.6.22 Residual impacts are those following the application of the mitigation measures. Chapters only include residual impacts which are different or new from those presented in the s.73 ES. Full updated Chapters list all identified residual impacts from that technical assessment.

4.7 Basis of the Assessments

- 4.7.1 This section sets out the key assumptions which form the basis of the assessments herein. This section includes general assumptions which apply throughout the Report.

Construction Phase

- 4.7.2 The construction phase of the Scheme is defined by the Indicative Construction Programme (ICP) which formed part of the s.73 ES and spans from commencement of construction in 2016 to completion of the Scheme in 2031. A Construction Impact Assessment (CIA) Addendum also formed part of the s.73 Application (BXC 21). The CIA is largely qualitative and focuses on the distance of sensitive receptors to construction works and the duration of the works. Topic chapters of the s.73 ES such as noise and vibration contain more detailed assessment in consideration of the types of construction equipment and vehicles and their respective sound power levels. Reference to the s.73 Code of Construction Practice (CoCP) and Construction Environmental Management Plan (CEMP) are applied where appropriate in this Report. The CoCP and CEMP will be updated and submitted to LBB prior to construction to discharge Planning Conditions 8.1, 8.3 and 28.1 of the 2014 Permission.
- 4.7.3 The ICP is an appendix within the CIA Addendum (BXC21). The ICP sets out the long term delivery programme for the Scheme with a breakdown of highway specific, open space and development plot works within each Development Phase (1-7). The ICP was updated for the s.73 Application in response to changes in the programme delivery including the moving forward of the majority of critical infrastructure to Phase 1. No further amendments on a Development Phase level have been proposed as part of the Phase 1A (North) RMAs, as such the ICP and therefore timing of the Scheme delivery remains the same in this Report as presented in the s.73 ES.
- 4.7.4 The sub-phasing change of plots 53 and 54 from sub-phase 1C to 1A (North) does not significantly impact on the ICP as these development plots remain within Phase 1 delivery and the plots are being developed for Whitefield Estate replacement units as considered previously in the ICP and the 2014 Permission. A review of the potential environmental impacts of the sub-phase change for plots 53 and 54 was undertaken and submitted under Planning Condition 4.2 of the 2014 Permission prior to the Phase 1A (North) RMAs submission. Further detail on this is provided in **Section 4.4** of this Report.

- 4.7.5 Waterman has been advised by Mace, the Applicant's construction advisors, that there are no significant changes to the CIA Addendum as submitted with the s.73 Application. Therefore, in relation to the construction methodology and approach set out in the s.73 ES this remains valid. As such, the construction methodology and approach has not been updated in any of the technical chapters within this Report.
- 4.7.6 Demolition works also form part of the Phase 1A (North) RMAs. However Mace has advised that these works remain consistent with the s.73 Application, with the exception of Clitterhouse Farm Buildings now being retained as described in **Chapter 2**, as such a statement of conformity will be provided within this Report. **Figure 2.1** shows the areas of demolition within Phase 1A (North) for consideration within this Report.

Operational Phase

- 4.7.7 Key assumptions with regard to the operational or completed stage of the Development are set out below. For all topics, EIA technical specialists have undertaken a review of the detailed design information now available as part of the Phase 1A (North) RMAs as defined by the Explanatory Reports which accompany the submission. A summary of this detailed design information is provided in **Chapter 2**.

Traffic Data

- 4.7.8 The strategic transport model which has been used for all planning related documents to date is termed the Brent Cross Cricklewood Transport Model (BXC TM). The BXC TM remains a robust tool to estimate the future transport impacts of the Brent Cross Cricklewood Development on both the highway network and the public transport network. This model is being used for the implementation of the Matrix as an input to the Phase Transport Report for Phase 1 and other submissions under the 2014 Permission planning conditions as it is considered to be the most appropriate tool that was or will be available for the preparation of such documents. The purpose of the Matrix and Phase Transport Reports are to ensure that the impacts of the Development remain within the overall envelope identified in the Transport Assessment accompanying the 2014 Permission and propose Supplementary Transport Measures if necessary for this purpose.
- 4.7.9 As the project moves into an implementation stage then a further transport model termed the Brent Cross Cricklewood Detailed Design Model (BXC-DDM) has been developed for detailed design purposes principally for obtaining the formal Technical Approvals for the highways designs. The BXC DDM has a significantly increased level of detail of both existing and forecast traffic movements on the local roads within the study area by means of a greater level of zonal disaggregation. This greater level of detail on local roads has been made possible by the use of TfL's new North London Highway Assignment Model (NoLHAM) when preparing the BXC DDM. There has been a good level of agreement in the detailed design assessed by the BXC DDM and the previous preliminary assessments of the BXC TM strategic model.
- 4.7.10 As such, the opportunity has been taken to use the traffic data from this new detailed design model (BXC DDM) to update the air quality and noise assessments within the s.73 ES. The BXC DDM includes the most recent baseline traffic survey counts from 2013 and reflects the detailed design highways network as defined by the Phase 1A (North) RMAs.

Planning Drawings and Parameter Plans

- 4.7.11 As the detailed design of the Phase 1A (North) RMAs elements have been finalised, the EIA team has reviewed the updated parameter plans and the detailed design drawings, which form the basis of this Report. The Revised Illustrative Masterplan, included as **Figure 2.1** provides an overview of the completed Development in its end state, whilst **Figure 1.3** shows only the Phase 1A (North) RMAs elements of the Scheme within the existing Site. The detailed design drawings which form the basis of this Report are listed in **Chapter 2**, whilst updated parameter plans will also be submitted with the RMAs.

Maximum Parameters

- 4.7.12 For certain technical topics influenced by building height and layout, the s.73 ES assessed the Illustrative Scheme as per Parameter Plan 015 with account taken of all reasonable variations through qualitative assessment, and presented the likely significant effects as appropriate.
- 4.7.13 The detailed design elements of Phase 1A (North) RMAs are assessed in this Report within the context of the approved development parameters relating to massing and dimensions for the remaining outline components. In consideration of topics such as townscape and visual impacts, wind, daylight and sunlight, the maximum consented height parameters of the Development Plots has been applied to the 3D model to provide a worst case scenario of the potential impacts. The purpose of this is to ensure that when consenting the Phase 1A (North) RMAs, LBB fully understands any potential 'interface' issues between the detailed design (Phase 1A (North) elements) and the approved maximum and minimum height parameters for the remaining consented Scheme.
- 4.7.14 This may have the potential to result in different or new impacts being identified from those of the s.73 ES particularly where assessments rely on building height information, such as wind, overshadowing and townscape and visual impacts. The wind and townscape and visual impact assessment have assessed both the illustrative and maximum parameter schemes to provide further information on the differences in impacts and to provide further design recommendations for future phases of the Scheme.

3D Model

- 4.7.15 In order to accurately identify and assess the impacts of the detailed design of Phase 1A (North) RMAs in relation to the Scheme as a whole and the existing surrounds, it has been necessary to aggregate a series of complex design models to gain a comprehensive overview of the Development. 3D models have been obtained from each design party on the project and integrated using GB ordnance survey (OS) grid referencing, ensuring all components are to a common scale.
- 4.7.16 The resulting comprehensive 3D model has been used for the noise, air quality, wind, overshadowing and townscape and visual impact assessment.
- 4.7.17 The 3D model also enables the Site to be accurately assessed with regard to the topography (existing and proposed levels) and accounting for the existing and future infrastructure which has several height variations.

'End State'

- 4.7.18 End state for the purpose of this Report is taken as 2031 as reported within the ICP. Within the s.73 ES there was a mixture of the End State being 2031 as per the ICP and 2026 for any assessments reliant on transport data. This was due to the Transport Model outputs being set to a 2026 End State and therefore the s.73 ES and previous ESs had assessed 2026 for transport impacts, noise and air quality. A sensitivity

assessment carried out on the 2008 RES traffic data deemed that the results remained representative from 2026 to 2031 for the End State so no change was required subsequently.

- 4.7.19 Due to the availability of the BXC DDM, it is no longer necessary to use 2026 data. As such, this Report assess the year 2031 for the End State of the Scheme in all chapters.

Intermediate Years Assessment

- 4.7.20 An intermediate years assessment was provided in the s.73 ES in response to requests from LBB for further information on the likely significant impacts of the Scheme during the long construction period from commencement in 2016 to completion in 2031. The intermediate years assessment is included as Chapter 20 in the s.73 ES. The Chapter provides a qualitative assessment of the Scheme at three snapshots in time:

- Quarter three of 2020 (nearing completion of Phase 1 works);
- Quarter two of 2023 (end of Phase 1 works and ongoing construction of subsequent phases);
- Quarter four of 2029 (nearing completion of the Scheme, prior to new railway station opening).

- 4.7.21 This Chapter has been reviewed and updated where necessary to reflect the outcome of the technical studies and detailed design of Phase 1A (North) RMAs and the impacts associated with operation of the temporary bus station and bus stops (Plots 114 and 113).

Cumulative Assessment

- 4.7.22 The cumulative schemes considered in the s.73 ES have been reviewed to reflect development schemes which have received planning permission or which have been built out since the cumulative assessment was undertaken and presented in the 2009 RES (and remained unchanged for the s.73 ES). The updated list assessed within this Report includes those identified within the Scoping Opinion (see **Table 4.1**). These are listed and are assessed within **Chapter 21**. **Figure 4.1** shows the location of the cumulative schemes assessed within **Chapter 21**.

4.8 Need for Further Assessment and Assumptions

- 4.8.1 It is acknowledged that there are certain areas of the proposals where details are not yet available to allow consideration of the associated environmental effects. Those areas are set out below:

Temporary Works

- 4.8.2 In relation to Phase 1A (North) it is recognised that there will be the need for temporary works and in particular due to the construction work around the River Brent and Prince Charles Drive realignments, the Brent Cross bus station will no longer be operational. As such, a temporary bus station and bus stops has been designed in consultation with TfL and LBB. The temporary bus station and bus stops have been assessed within each technical chapter of this Report and is included within the first intermediate year assessed in **Chapter 20**.
- 4.8.3 Due to the timing of the Phase 1A (North) RMAs and particularly in relation to the transport modelling, construction logistics and related infrastructure design, it has not been possible to complete and agree the details of the temporary works within the timeframes of the current RMAs. The Applicant therefore intends to submit a separate Temporary Works RMA in 2015. In reality, any significant effects arising from temporary works are unlikely to materially affect the findings of the ES Further Information Report for the

Phase 1A (North) RMAs permanent works given this focuses primarily on permanent impacts, rather than the temporary impacts to be addressed in the temporary works submission.

- 4.8.4 It is not essential for a robust and compliant approach, but the intention is also that any related further environmental information to be provided by the Applicant deemed necessary to inform decision making for the Temporary Works RMA is intended to be available within the determination period for the Phase 1A (North) RMAs. The necessary environmental information will therefore be adequate when the relevant decisions are made on the respective RMAs.

Energy Strategy and Waste Handling Facility

- 4.8.5 Other areas of the Scheme which are likely to require consideration of the need for environmental information include the Revised Energy Strategy once details are known. The s.73 ES assumed a single CHP located in plot 59 with the preferred option of refuse derived fuel (RDF). Studies linked to the pre-RMA conditions have not definitely confirmed as yet which energy type will be taken forward for the Development, details of the proposed energy centre(s) or the waste collection and end use from the Development. The Phase 1A (North) RMAs submission does not include detailed design or technical information on the fuel type or operations of the energy centre in addition to what has previously been provided within the s.73 ES and from that which is contained within the Revised Energy Strategy. It is proposed that these details would be provided and assessed for potential environmental impacts as part of Phase 1B (North) RMA which would be submitted for reserved matters in 2015/2016. At this stage, the need for and scope of further environmental information relating to the energy centre and associated stack would be provided, e.g. air quality, noise and visual impacts.
- 4.8.6 In relation to waste, the Waste Handling Facility is proposed to be the subject of a separate RMA in late 2015 at which time the detailed design for this would come forward. This will then enable an update to the waste assessment and any related assessments such as noise, traffic and visual impacts, as deemed appropriate.
- 4.8.7 A Vacuum Waste Collection Feasibility Study was carried out in 2014 to discharge Pre-RMA Condition 1.24 of the 2014 Permission. The study concluded that vacuum waste collection is not currently a viable option for the delivery of the Northern Development; however, it is still a potential option for the Southern Development to progress. As such, an allowance for vacuum waste collection infrastructure has been included within the proposed highways infrastructure for Phase 1A (North) and subsequent phase 1 proposals. The s.73 ES included reference to a vacuum waste collection service for the Scheme as an option however it was not assessed as the only option for waste collection, therefore it is not considered that the outcome of this study will alter the results of the s.73 ES at this stage. When a decision has been made on the final energy and waste strategy this will be captured within the relevant sub-phase report. As such, the Phase 1A (North) waste collection is based upon traditional road-side refuse collection service by the local authority LBB.

Construction Consolidation Centre

- 4.8.8 Pre-RMA Condition 1.9 of the 2014 Permission requires a feasibility study for a Construction Consolidation Centre (CCC) for the Development as a whole phase by phase. This feasibility study has been prepared by Mace and considers several potential sites and scores them with regard to their suitability for use during the construction of the Development. At present there is no indication of a preferred option that will be taken forward, and therefore the CCC has not been considered within this Report. Once a decision is reached by the Applicant on which CCC option is to be taken forward for Phase 1 and details are available it will be

possible to consider the need for and scope of any further environmental information at this stage. If an off-Site CCC is selected then it may be more appropriate to consider the need for environmental studies and the appropriate balls for assessment to accompany a separate planning application (if required).