



**RESERVED MATTERS APPLICATIONS  
FOR PHASE 1A  
(NORTH)**

**BRENT CROSS CRICKLEWOOD**

**EXPLANATORY REPORT**

**ON BEHALF OF BRENT CROSS  
CRICKLEWOOD  
DEVELOPMENT PARTNERS**

October 2015

Our Ref: Q20027

## Contents

1	INTRODUCTION.....	1
2	THE 2014 PERMISSION .....	9
3	BRIDGE STRUCTURE B1 (REPLACEMENT A406 TEMPLEHOF BRIDGE) AND TEMPLEHOF AVENUE .....	24
4	TILLING ROAD WEST RE-ALIGNMENT AND DIVERSION (PART 1).....	33
5	RIVER BRIDGE 1, RIVER DIVERSION AND NATURE PARK NP5 .....	35
6	SUSTAINABILITY AND ENGERY .....	40
7	ENVIRONMENTAL COMPLIANCE .....	41
8	CONCLUSIONS .....	42

## Appendices

APPENDIX 1: HIGHWAY LANDSCAPE IMPLEMENTATION WORKS PROGRAMME

APPENDIX 2: LANDSCAPE IMPLEMENTATION WORKS PROGRAMME

APPENDIX 4: SUSTAINABILITY AND ENERGY

## Tables

Table 1.1 – Phase 1A (North) RMA Submission Documentation .....	6
Table 2.1 – Phase 1A (North) Pre-RMA Conditions.....	11
Table 2.2 – Phase 1A (North) RMA Inconsistencies with Pre-RMA Conditions .....	14
Table 2.3 – Phase 1A (North) items subject to these RMAs.....	15
Table 2.4 – RDSF, DAS, RDG, Planning Condition and Other Requirements .....	18
Table 2.5 – Details required by Condition 2.1 to support Phase 1A (North) RMAs .....	21

# 1 INTRODUCTION

## a) Background

- 1.1 Quod has been instructed by the Brent Cross Cricklewood (“BXC”) Development Partners to prepare this Explanatory Report in support of additional Phase 1A (North) for Reserved Matters Applications (“RMA”) for which contain alternative proposals for some elements of Phase 1A (North).
- 1.2 Planning Permission Ref No. C/17559/08 (“2010 Permission”) for the comprehensive redevelopment of BXC was granted in October 2010. A Section 73 planning permission Ref No. F/04687/13 (“2014 Permission”) to develop land without complying with conditions attached to the 2010 Permission was granted by London Borough of Barnet (“LBB”) on 23 July 2014.
- 1.3 The RMAs now submitted are made pursuant to Conditions 1.2.1.A, 2.1 and part discharge of Condition 13.1 of the 2014 Permission relating to details of Layout, Scale, Appearance, Access and Landscaping as appropriate.
- 1.4 The 2014 Permission divides the site up into a series of Phases and Sub Phases. Phase 1A (North) is defined as consisting of a number of Critical Infrastructure (“CI”) items and two development plots (moved from Phase 1C following an approval under Condition 4.2 Ref No F/05552/14). These can be separated into the following three categories:
- Phase 1A (North) Infrastructure:
    - A406 Brent Cross Ingress/Egress Junction Improvements
    - A41/A406 Junction Improvements
    - Prince Charles Drive Diversion
    - Bridge Structure B1 (Replacement A406 Templehof Bridge)
    - Bridge Structure B7 (Living Bridge) (for approval purposes only)
    - M1/A406 and A5/A406 Junction Improvements
    - A407 Cricklewood Lane/Claremont Road Junction Improvements
    - A5/A407 Cricklewood Lane Junction Improvements
    - Claremont Avenue
    - Claremont Road Junction North
    - Templehof Avenue and Templehof Link Road
    - Tilling Road West Re-alignment and Diversion (Part 1)
    - Claremont Avenue Junction with Tilling Road
    - High Street South (East Works)

- Bridge Structure B6 (M1 Junction Pedestrian and Cycle Bridge)
- Orchard Lane
- Brent Cross Pedestrian Underpass Works
- Eastern River Brent Alteration & Diversion Works
- River Brent Bridges (as relevant to the Eastern River Brent Alteration and Diversion Works)
- Central River Brent Alteration & Diversion Works
- River Brent Bridges (as relevant to the Central River Brent Alteration and Diversion Works)
- Western River Brent Alteration & Diversion Works
- River Brent Bridges (as relevant to the Western River Brent Alteration and Diversion Works)
- Whitefield Estate Replacement Units (Part 1)
- Bus Station Temporary Facility

- Phase 1A (North) Open Space:

- Claremont Park Improvements
- Clitterhouse Playing Fields Improvements Part 1
- Central Brent Riverside Park including River Brent Nature Park (NP5)

- Phase 1A (North) Development Plots:

- Plots 53 and 54 (for the provision of 47 Whitefield Estate Replacement Units)

1.5 The Phase 1A (North) Infrastructure, Phase 1A (North) Open Space (Clitterhouse Playing Fields (Part 1) and Claremont Park), Phase 1A (North) Development Plots and Phase 1A (North) Central Brent Riverside Park (“CBRP”) have been the subject of separate RMA.

1.6 The Phase 1A (North) Development Plots RMA (Ref.No. 15/00720/RMA) and a related application under Condition 2.4 (Ref.No. 15/00834/CON) were granted approval in May 2015. The Phase 1A (North) Open Space RMA (Ref.No. 15/00769/RMA) was also granted permission in June 2015, with a related submission under Conditions 2.4 and 2.5 (Ref.No. 15/00664/CON) also granted in June 2015.

1.7 In September 2015, LBB’s Planning Committee unanimously resolved to grant permission for the Phase 1A (North) Infrastructure (Ref.No.15/03312/RMA) and Phase 1A (North) CBRP (Ref.No. 15/03315/RMA) RMAs, as well as a related application under Conditions 2.4 and 2.5 (Ref.No. 15/05040/CON). The Section 106 Agreement associated with these resolutions is currently being finalised.

1.8 Since the approvals the Development Partners (“DPs”) have continues to work with LBB and the highways authorities, particularly with respect of highway technical approval process. As a result of



this ongoing engagement the DPs have investigated alternative designs for a limited number of specific infrastructure items within Phase 1A (North). It is these alternative design proposals which form the basis of the four RMAs now submitted.

1.9 Each alternative design proposal is described in detail in this Report, but in summary they consist of the following:

- Phase 1A (North) Bridge Structure B1 (Replacement A406 Templehof Bridge) RMA – alternative design that reduces the overall width of the bridge to accommodate 2 vehicular lanes rather than 4 lanes, and alternative designs to associated road infrastructure;
- Phase 1A (North) Tilling Road West Realignment and Diversion (Part 1) RMA – alternative design to the Tilling Road West/Brent Terrace North junction which reduces the need for temporary tie in works to align the junction with existing Brent Terrace North;
- Phase 1A (North) River Bridge 1 and Central and Western River Brent Alteration & Diversion Works RMA – an alternative design for River Bridge 1 (the western element of the Western Roundabout) which lengthens the structure to improve buildability of the bridge abutments, which. This results in an alternative design to a small element of the Central and Western River Brent Alterations and Diversion works where it passes through the Western Roundabout; and
- Phase 1A (North) Central Brent Riverside Park RMA – as a result of the RMA described, alternative designs are proposed for a small section of the River Park including to Nature Park NP5 (although it is very similar to that previously approved).

1.10 This Explanatory Report has been produced in support of all four RMAs.

**b) Site Context**

1.11 The BXC site comprises an area of 151ha and is located within the London Borough of Barnet (“LBB”). The site includes Brent Cross Shopping Centre to the north, the A41 and Brent Cross London Underground Station to the east, Cricklewood Lane to the south and the A5 to the west.

1.12 The site represents a significantly underutilised area of brownfield land comprising industrial uses, former railway land and retailing premises surrounded by large areas of surface level car parking.



Nevertheless, given its location at the connection between the M1 and the A406, BXC represents an underused gateway site into London. The potential of the site is reinforced by its connection with the A5 and A41, and its close proximity to the Northern Line at Brent Cross London Underground Station, the Midland mainline railway and Brent Cross bus station.

1.13 In view of its location and its current poor environment and urban structure, the BXC site has been identified for over a decade within regional and local planning policy for comprehensive and strategic redevelopment. The site is identified in both the Mayor’s London Plan (2015) and the adopted Barnet Core Strategy (2012) and saved Chapter 12 of the Barnet Unitary Development Plan (UDP) (2006) as an appropriate location to accommodate significant new homes and jobs as part of a comprehensive regeneration scheme.

1.14 In line with the London Plan, a site-specific Development Framework was produced in April 2004 as Supplementary Planning Guidance, and updated in December 2005. The document establishes a vision ‘to create a new gateway for London and a vibrant urban area for Barnet’. The document also states that:

**“The regeneration area will be the heart of a new mixed use development and provide a new town centre for Barnet. The new town centre will be developed on both sides of the A406 North Circular Road, along a new High Street.” (Page 9)**

**c) Purpose and Structure of the Explanatory Report**

1.15 Condition 2.1 of the 2014 Permission requires that RMAs are supported by a range of information including an ‘Explanatory Report’. This states that the Explanatory Report is required to:

- respond to the requirements of Condition 1.16 i.e. that all RMAs be in accordance with the parameters and principles described, mentioned or referred to in the RDSF (including all of the Parameter Plans), the principles described in the Revised Design and Access Statement (“RDAS”) and the Revised Design Guidelines (“RDG”); and demonstrate that the RMA has covered all matters identified in Condition 2.1 (as described at paragraphs 6.2, 6.15 and 6.16 of the RDSF).

1.16 Paragraph 6.2 of the RDSF broadly describes the matters for which details will be required to be provided in the RMAs i.e. access, layout, scale, appearance and landscaping. The Town and Country



Planning (Development Management Procedure) (England) Order 2010 (“DMPO”) confirms that in relation to reserved matters:

- **‘Layout’ means the way in which buildings, routes and open spaces within the development are provided, situated and orientated in relation to each other and to buildings and space outside the development;**
- **‘Scale’ means the height, width and length of each building (which includes any structure or erection) proposed within the development in relation to its surroundings;**
- **‘Access’ means the accessibility to and within the site, for vehicles, cycles and pedestrians in terms of the positioning and treatment of access and circulation routes and how these fit into the surrounding access network;**
- **‘Appearance’ means the aspects of a building or place within the development which determine the visual impression the building or place makes, including the external built form of the development, its architecture, materials, decoration, lighting, colour and texture; and**
- **‘Landscaping’ means the treatment of land (other than buildings) for the purpose of enhancing or protecting the amenities of the site and the area in which it is situated and includes screening by fences, walls or other means; the planting of trees, hedges, shrubs or grass; the formation of banks, terraces or other earthworks; the laying out or provision of gardens, courts, squares, water features, sculpture or public art; and the provision of other amenity features.**

1.17 Paragraph 6.15 of the RDSF lists the documentation that is anticipated to be provided, where necessary and appropriate, to support a RMA. This includes:

- a cover letter;
- application plans;
- an Explanatory Report;
- a Reserved Matters Transport Report;
- a Statement of Community Involvement;

- an up-to-date Illustrative Reconciliation Plan (where the details approvals sought include or affect the layout); and
- any other drawings or materials necessary to demonstrate how the proposed details are consistent with the parameters and principles under the planning permission.

1.18 This Explanatory Report for the four RMAs should be read in conjunction with the other supporting documents as set out in **Table 1.1** below.

**Table 1.1 – Phase 1A (North) Infrastructure RMA Submission Documentation**

2	Bridge Structure B1 (Replacement A406 Templehof Bridge) and Templehof RMA	Tilling Road West and Diversion (Part 1) RMA	River Bridge 1 and Central and Western River Brent Alteration & Diversion Works RMA.	Central Brent Riverside Park RMA
Volume 1	Cover Letter			
	Application Form	Application Form	Application Form	Application Form
	Community Infrastructure Levy (CIL) Form	Community Infrastructure Levy (CIL) Form	Community Infrastructure Levy (CIL) Form	Community Infrastructure Levy (CIL) Form
Volume 2	Explanatory Report			
Volume 3	ES Addendum to the Revised ES Further Information Report			
Volume 4	Application Drawings	Application Drawings	Application Drawings	Application Drawings
Volume 5	-		Hydraulic Note	-
	Illustrative Reconciliation Plan			-
	Reserved Matters Transport Report Addendum			-

1.19 A Statement of Community of Involvement was submitted with the previous Phase 1A (North) RMAs. The document summarises the context and consultation history for BXC; outlines the consultation strategy, activities and engagement with stakeholders and the media, the feedback received and the DP’s responses to this feedback. The items of infrastructure within the RMAs have previously been extensively consulted upon and given the nature of the alternative designs and the fact the



discussions to date regarding the alternative proposals have been technical in nature with LBB and the highway authorities the document remains accurate and it is not updated.

1.20 Paragraph 6.16 of the RDSF sets out the intended scope of the Explanatory Report, which this report follows.

1.21 Condition 2.1 also sets out a wider list of requirements which are to be considered for each RMA (or Other Matters Application), unless otherwise agreed in writing with LBB. The scope of this RMA in the context of Condition 2.1 is provided in Section 2 (Table 2.5) of this Explanatory Report.

1.22 In summary, the purpose of the Explanatory Report is to demonstrate that these RMAs for the Phase 1A (North):

- Are in accordance with the relevant parameters, principles and other controls included in the 2014 Permission;
- Comply with the EIA Directive;
- Achieves high standards of urban design, landscaping and environmental mitigation; and
- Provide a clear written record of these matters.

1.23 The four RMAs seek to provide sufficient information and detail for LBB to make a decision on the matters to be discharged under Conditions 1.2.1A, 2.1 and part discharge of Condition 13.1 of the 2014 Permission and demonstrate conformity, where relevant, with the following documents:

- Conditions attached to the 2014 Permission;
- Section 106 Agreement (“S106 Agreement”) of the 2014 Permission;
- RDSF;
- RDAS;
- RDG; and
- Details approved under the Phase 1A (North) Pre-RMA conditions.

- 1.24 An ES Addendum to the Revised ES Further Information Report has been prepared to consider whether the Environmental Statement (BXC03) submitted in support of the 2014 Permission along with the Environmental Statement Further Information Report submitted alongside the previous Phase 1A (North) RMAs remains adequate for decision making and provides further environmental information where relevant.
- 1.25 The remaining sections of this Explanatory Report are structured to respond to the requirements of Condition 2.1 as follows:
- Section 2 - 2014 Permission
  - Section 3 – Bridge Structure B1 (Replacement A406 Templehof Bridge) and Templehof Avenue
  - Section 4 - Tilling Road West Re-alignment and Diversion (Part 1)
  - Section 5 - River Bridge 1, River Diversion and Nature Park NP5
  - Section 6 – Sustainability and Energy
  - Section 7 - Environmental Compliance
  - Section 8 – Conclusions

## 2 THE 2014 PERMISSION

2.1 The 2014 Permission provides for the comprehensive regeneration of the BXC site, and is described as follows:

**“Development of land without complying with conditions subject to which planning permission ref. C/17559/08 (dated 28 October 2010) was granted for the Comprehensive mixed use redevelopment of the Brent Cross Cricklewood regeneration area comprising residential uses (Use Class C2, C3 and student/special needs/sheltered housing), a full range of town centre uses including Use Classes A1 – A5, offices, industrial and other business uses within Use Classes B1 - B8, leisure uses, rail based freight facilities, waste handling facility and treatment technology, petrol filling station, hotel and conference facilities, community, health and education facilities, private hospital, open space and public realm, landscaping and recreation facilities, new rail and bus stations, vehicular and pedestrian bridges, underground and multi-storey parking, works to the River Brent and Clitterhouse Stream and associated infrastructure, demolition and alterations of existing building structures, CHP/CCHP, relocated electricity substation, free standing or building mounted wind turbines, alterations to existing railway, Cricklewood railway track and station and Brent Cross London Underground station, creation of new strategic accesses and internal road layout, at grade or underground conveyor from waste handling facility to CHP/CCHP, infrastructure and associated facilities together with any required temporary works or structures and associated utilities/services required by the Development.”**

2.2 The 2014 Permission is subject to a S106 Agreement which, along with the Planning Conditions, provides an overarching framework of control for the implementation of the development.

2.3 In particular, Condition 1.16 requires all RMA to be in accordance with the parameters and principles contained in the RDSF, RDAS and RDG, and these documents therefore provide a further layer of control:

- The RDSF provides a detailed specification of the key components of the development (the primary structural elements of the application with regard to access, movement, scale, use, and urban structure and hierarchy) together with a framework to guide its implementation. It also specifies the parameters, principles, constraints and restrictions within which the ‘flexible’ elements of the scheme are contained. The principal aim of the document is to guide the

physical aspects of the development in order to create a high quality scheme which is within the scope of what has been assessed through the Environmental Impact Assessment process;

- The RDAS describes how the primary structural elements combine to establish the character and identity of the development and the way in which development zones come together to form an integrated, diverse, new town centre. It provides a general understanding of the intended character and identity of the development. Many of the aspects of the RDAS are noted to be for illustrative purposes only; and
- The RDG are a working tool that can be used to inform the design process; shaping the way in which BXC evolves over time. It provides a thorough inventory of the key ordering elements that will combine to form the character and identity outlined in the DAS. The RDG identifies Illustrative Street Typologies which provide an illustrative guide to help the way in which streets defined in Parameter Plan 003 could be developed. These typologies are intended to provide a general guide not a detailed or fixed definition of the final condition as built and it is the over-arching character of the streetscape that is under consideration.

**a) Implementation of the 2014 Permission**

- 2.4 The planning conditions and S106 Agreement attached to the 2014 Permission require that a number of strategies / reports / feasibility studies etc. are submitted to LBB prior to submission of RMA for a Phase or Sub-Phase. These are referred to as 'Pre-RMA Conditions'.
- 2.5 The relevant Pre-RMA Conditions for Phase 1A (North) are identified in Table 2.1, together with a status update on each e.g. submitted, discharged etc.

**Table 2.1 – Phase 1A (North) Pre-RMA Conditions**

Condition Ref	Condition Requirement	Date of Registration	LBB Reference	Status
1.9	Submission and approval of CCC Feasibility	14/11/14	14/07508/CON	Discharged 06/02/2015
1.17	Submission of Illustrative Reconciliation Plan (Updated 05/06/2015)	02/02/15	15/00660/CON	Pending Determination (Deadline – 29/06/2015)
1.18	Establishment of the Access Forum	09/12/14	14/07889/CON	Discharged 26/03/2015
1.19	Establishment of the Energy Panel	09/12/14	14/07890/CON	Discharged 26/03/2015
1.20	Submission of the Area Wide Walking and Cycling Study (Updated 16/07/2015)	19/12/14	14/08105/CON	Discharged 10/09/2015
1.21	Submission of the Framework Servicing and Delivery Strategy	17/12/14	14/08112/CON	Discharged 09/09/2015
1.22	Submission of the Phase 1AN Servicing and Delivery Strategy	17/12/14	14/08111/CON	Discharged 09/09/2015
1.23	Submission of Public Consultation Strategy	09/12/14	14/07891/CON	Discharged 31/03/2015
1.24	Submission of Vacuum Waste Collection Feasibility Study	05/02/15	14/07961/CON	Discharged 30/03/2015
1.25	Submission of BXC Mobility Feasibility Study	11/12/14	14/07955/CON	Discharged 31/03/2015
1.26	Submission of Inclusive Access Strategy	11/12/14	14/07957/CON	Discharged 15/05/2015
2.2	Submission of Clitterhouse Mobility Scheme	11/12/14	14/07960/CON	Discharged 31/03/2015

Condition Ref	Condition Requirement	Date of Registration	LBB Reference	Status
2.3	Submission of Site measure of open space	09/12/14	14/07888/CON	Discharged 10/07/2015
2.7	Submission of A5 Corridor Study (Updated 16/07/2015)	11/11/14	14/07402/CON	Pending Determination (Deadline - 06/01/2015)
2.8	Submission of Pedestrian & Cycle Strategy (Updated 05/06/2015)	17/12/14	14/08110/CON	Discharged 10/09/2015
7.1	Submission of Estate Management Framework (Updated 08/06/2015)	29/01/15	15/00660/CON	Discharged 10/09/2015
10.1	Submission of Skills and Development Method Statement	09/12/14	14/07892/CON	Discharged 31/03/2015
11.1	Submission of Car Parking Management Strategy	17/12/14	14/08109/CON	Discharged 09/09/2015
11.2	Submission of Phase Parking Standards and Strategy	17/12/14	14/08108/CON	Discharged 09/09/2015
27.1	Submission of Existing Landscape and Mitigation Measure (Updated 05/06/2015)	09/12/14	14/07897/CON	Discharged 10/09/2015
27.2	Submission of Tree Protection Method Statement (Updated 20/02/2015)	09/12/14	14/07896/CON	Discharged 10/09/2015
27.8	Submission and approval of Invasive Plants	20/08/14	F/04565/14	Discharged 12/11/2014

Condition Ref	Condition Requirement	Date of Registration	LBB Reference	Status
29.1	Submission of Acoustic Design Report	02/02/15	15/00668/CON	Discharged 10/09/2015
31.1	Submission and approval of Remediation Zones	14/11/14	14/07509/CON	Discharged 04/02/15
33.3	Submission of Telecoms Statement	09/12/14	14/07895/CON	Discharged 31/03/2015
35.3	Submission of RDF Feasibility Study	09/12/14	14/07893/CON	Discharged 13/07/2015
35.4	Submission of Further Feasibility Report	11/12/14	14/07959/CON	Discharged 13/07/2015
35.6	Submission of Revised Energy Strategy (Updated 20/02/2015)	17/12/14	14/08106/CON	Discharged 13/07/2015
37.1/37.3	Submission of Phase Transport Report Scope	14/11/14	14/07506/CON	Discharged 10/02/2015
37.2/37.4	Submission of Phase Transport Report (Updated 05/06/2015)	10/02/15	15/00812/CON	Discharged 10/02/2015

2.6 A revised scope for the Reserved Matters Transport Report Addendum was submitted under Condition 37.1 (Ref. No. 15/06452/CON) and approved by LBB on 23 October 2015.

2.7 A number of the Pre-RMA Conditions are structured such that they require subsequent RMAs to be in accordance with the documents approved under the condition. As a result, in preparing these RMAs for alternative infrastructure designs a review of the relevant approved Pre-RMA Conditions has been undertaken. This review has identified that a handful of inconsistencies exist, primarily in relation to the proposal to reduce the vehicular lanes on Templehof Bridge and as a result remove the dedicated bus lanes. The specific areas of inconsistency are identified in Table 2.2 below.

**Table 2.2 – Phase 1A (North) RMA Inconsistencies with Pre-RMA Conditions**

Condition No.	Document	Relevant Paragraph Number	Relevant Text
1.20	Area Wide Walking and Cycling Study Addendum	A3.10	<i>“Templehof Avenue and Templehof Bridge - This road is yet to be designed in detail but the bridge will be a land mark structure offering a multi modal link between north and south, comprising dedicated bus lanes and sheltered pedestrian walkways.”</i>
2.7	A5 Corridor Addendum	4.1	<i>“The DPs will also construct the bus lanes, bus and access only routes and bus stops for each sub-phase/phase shown indicatively on drawing No D119038/046 Rev B (Schedule 8, S106 Agreement)”</i>
		4.5.5	<i>“Drawing number BXCR-URS-ZZ-XX-SK-CE-00012_P01 (see below) shows end-state bus priority proposals. The proposals largely comprise of a combination of bus lanes and enhanced junction performance due to capacity upgrades at key junctions.”</i>
37.2/37.4	Phase Transport Report	6.2	<i>“New bus lane to be provided on the eastern side of the replaced Tempelhof Bridge”</i>
		12.3	<i>“The provision of bus priority such as on Tempelhof Bridge and the delivery of new infrastructure including a new junction on the A41 and improvements to the underpass under Tilling Road will also benefit the existing bus services operating within the vicinity of the development during Phase 1”</i>

2.8 As summarised in Table 2.2 above the inconsistencies purely relate to textual matters and do not affect the conclusions in any document. The DPs will work with LBB to update these documents as necessary prior to the determination of these RMAs.

2.9 Conditions 2.4 and 2.5 of the 2014 Permission provide the ability for LBB to approve minor revisions to the RDSF, the RDAS and the RDG, subject to confirmation that no significant adverse environmental effects will be brought about by such changes.

2.10 Aligned to these RMAs, an application under Conditions 2.4 and 2.5 has been made to seek minor variations to the parameters and principles associated with the RMAs now submitted. These minor variations are explained in detail in the Explanatory Report that supports the submission under Conditions 2.4 and 2.5 as well as in this document.

2.11 It is also proposed to amend the definition of Bridge Structure B1 (Replacement A406 Templehof Bridge) through Condition 1.30 attached to the 2014 Permission via written agreement with LBB.

**b) Development which is the subject of this RMA**

2.12 As described in paragraph 1.9 the four RMAs submitted relate to specific parts of Phase 1A (North) as listed in Table 2.3 below.

2.13 The Phase 1A (North) items relevant to the four RMAs are listed in Table 2.3 below.

**Table 2.3 – Phase 1A (North) items subject to these RMAs**

Type of infrastructure	Infrastructure item and description	Relevant Approved plan	Relevant Informative Plan
Primary and Secondary Routes	Templehof Avenue/section of Templehof Link Road and The route connecting Market Quarter and Brent Cross East Zones across Bridge Structure B1 (A406 Templehof Bridge) and its junctions with Templehof Link Road and High Street South (East Works).	Parameter Plan 002	649_SK_00_326
	Tilling Road West Re-alignment and Diversion (Part 1) The alterations including at the junction with Brent Terrace North	Parameter Plan 002	649_SK_00_326
Engineering Works	Central and Western River Brent Alteration & Diversion Works The alteration and diversion works to the River Brent.	Parameter Plan 011	649_SK_00_326
Bridge Structures	Bridge Structure B1 (Replacement A406 Templehof Bridge)	Parameter Plan 002	-

Type of infrastructure	Infrastructure item and description	Relevant Approved plan	Relevant Informative Plan
	The creation of a replacement road bridge to provide a link over the A406 to link Market Quarter and Brent Cross East and West Zones	47067355-A406-12-SK-014 Rev C (as per parameters in DSF)  47067355-A406-12-SK-015 Rev B (as per parameters in DSF)  47067355-A406-12-SK-016 Rev A (as per parameters in DSF)  47067355-A406-12-SK-020A (as per parameters in DSF)  47067355-A406-12-SK-021A (as per parameters in DSF)	
	River Brent Bridges (as relevant to the Eastern, Western and Central River Brent Alteration and Diversion Works)  Two pedestrian and cyclist only bridges and eight vehicular bridges to be provided (as part of the River Brent Alteration and Diversion Works and the River Brent Riverside Park) over the River Brent within Brent Cross East and West Development Zones.	Parameter Plan 003 Parameter Plan 011	
Open Space	Central Brent Riverside Park Alterations to layout of Nature Park NP5	Parameter Plan 003 Parameter Plan 011	

2.14 The general location of the items that form the RMAs now submitted have been established and approved under the 2014 Permission through the relevant Parameter Plans in the RDSF. The key Parameter Plans are listed below, and the supporting text to the Parameter Plans (Appendix 2 of the RDSF) explains how the limits of deviation apply to the infrastructure:

- Parameter Plan 002 (Transport Infrastructure)** – identifies the location of the new/improved highway junctions and primary routes; the approximate location of secondary and tertiary routes; and zones for new highway and pedestrian bridges and underpasses (subject to limits of deviation).

- **Parameter Plan 003 (Public Realm and Urban Structure)** – identifies a network of new and existing public spaces and public realm; and routes between them for pedestrians and cyclists.
- **Parameter Plan 006 (Proposed Finished Site Levels)** – shows the proposed finished site levels (in metres AOD) for infrastructure and public realm.
- **Parameter Plan 011 (River Brent)** – identifies the proposed zone for the re-aligned river corridor.

2.15 Parameter Plan 015 (Indicative Layout Plan) illustrates one way in which the BXC development could be configured based on the parameters and principles of the Parameter Plans. RMAs are not required to comply with this plan, provided that they comply with the other parameters. However, this plan does form the base plan for the Reconciliation Process and preparation of an Illustrative Reconciliation Plan (Condition 1.17), which is to demonstrate how, the scheme will gradually evolve to a comprehensive development of the whole site within the terms of the parameters and principles approved under the permission.

2.16 In response to Condition 1.16, Table 2.4 below provides a summary of the key design requirements applying to the items that form part of the RMAs now submitted which are contained in the RDSF, RDAS and RDG. It also details where Planning Conditions and obligations in the S106 Agreement are relevant.

**Table 2.4 – RDSF, DAS, RDG, Planning Condition and Other Requirements**

Infrastructure item	Revised Design Specification and Framework (RDSF) and Parameter Plans (PP)	Revised Design and Access Statement (RDAS)	Revised Design Guidance (RDG)	Key Planning Conditions (where relevant to RMA)	S106 Agreement and other relevant planning application documents
Bridge Structure B1 (Replacement A406 Templehof Bridge)	<p>Paragraphs 4.5 and 4.6 of the DSF</p> <p>PP 002 &amp; supporting text paragraph 12 re horizontal limits of deviation</p> <p>PP 006 re proposed bridge deck level and limit of vertical deviation</p>	<p>Section A2.2.1</p> <p>Section A3.1</p> <p>Section A3.9</p> <p>Section A5.1 Access</p>	<p>Section B2.2.1</p> <p>Section 4.3.2 (component palette)</p>	<p>Condition 1.16 (compliance with RDSF, RDAS, RDG)</p> <p>Condition 2.1 (content of RMA)</p> <p>Condition 34.5 (Wind Mitigation Measures)</p>	-
Templehof Avenue/sections of Templehof Link Road and High Street South (East Works)	<p>RDSF paragraphs 4.5 and 4.6 (relating to A406 Templehof Bridge)</p> <p>PP 002 &amp; supporting text identify a limit of deviation of +/- 35m.</p> <p>Indicative Zonal Layout PP 020</p>	<p>Section A5.1 Access</p>	<p>Section B2.2 (with an illustrative street typology at B2.2.1)</p> <p>Section 4.3.2 (component palette)</p>	<p>Condition 1.16 (compliance with RDSF, RDAS, RDG)</p> <p>Condition 2.1 (content of RMA)</p>	-
Tilling Road West Re-alignment and Diversion (Part 1)	<p>PP 002 &amp; supporting text</p> <p>Indicative Zonal Layout PP 022</p>	<p>Section A5.1 Access</p>		<p>Condition 1.16 (compliance with RDSF, RDAS, RDG)</p> <p>Condition 2.1 (content of RMA)</p>	-

Infrastructure item	Revised Design Specification and Framework (RDSF) and Parameter Plans (PP)	Revised Design and Access Statement (RDAS)	Revised Design Guidance (RDG)	Key Planning Conditions (where relevant to RMA)	S106 Agreement and other relevant planning application documents
River Brent Bridge 1	<p>Paragraphs 4.23, 4.24, 4.25 and 4.26 of the DSF</p> <p>PP 003 and PP 011</p>	Section A5.1 Access	-	<p>Condition 1.16 (compliance with RDSF, RDAS, RDG)</p> <p>Condition 2.1 (content of RMA)</p> <p>Condition 34.5 (Wind Mitigation Measures)</p>	-
Central and Western River Brent Alteration & Diversion Works	<p>Paragraphs 3.24 to 3.26 of the DSF</p> <p>PP 011 &amp; supporting text paragraph 4-9 (Eastern), 10-15 (Central) and paragraph 16-23 (Western)</p> <p>Indicative Zonal Layout PP 027 and 028</p>	<p>Masterplan refinements</p> <p>Section A5.1 Access</p>	Section 4.3.1 (component palette)	<p>Condition 1.16 (compliance with RDSF, RDAS, RDG)</p> <p>Condition 2.1 (content of RMA)</p>	-
Central Brent Riverside Park/Nature Park NP5	<p>Paragraphs 3.25 – 3.26</p> <p>Parameter Plan 003</p> <p>Parameter Plan 011 (including Table 4)</p> <p>Table 5 (page 43)</p>	<p>Section A2.6.2 (Open Space Hierarchy)</p> <p>Section A3.9 River Brent (Brent Riverside Park)</p>	<p>B3.2.3 (illustrative space typology)</p> <p>Section B4.3.1 (Components Schedule)</p>	<p>Condition 1.16 (compliance with RDSF, RDAS, RDG)</p> <p>Condition 2.1 (content of RMA)</p> <p>Condition 27.4 (Planting Details)</p>	PROSS, text at page 125 (BXC7)

Infrastructure item	Revised Design Specification and Framework (RDSF) and Parameter Plans (PP)	Revised Design and Access Statement (RDAS)	Revised Design Guidance (RDG)	Key Planning Conditions (where relevant to RMA)	S106 Agreement and other relevant planning application documents
	Indicative Zonal Layout Parameter Plans 27 & 28			Condition 27.6 (Landscaping Works)	

2.17 The RDSF sets out (at paragraph 6.2) the scope of each for each Reserved Matter (layout, scale, appearance, access and landscaping) which will require approval.

2.18 Planning Condition 2.1 sets out more detailed requirements which are also to be considered for each RMA, unless otherwise agreed in writing with the Local Planning Authority. Table 2.5 below shows which of the requirements set out in Condition 2.1 apply to the items which form part of these RMAs. This has been agreed with LBB prior to the submission of this RMA.

**Table 2.5 – Details required by Condition 2.1 to support Phase 1A (North) RMAs**

Condition 2.1 General RMA Requirements - Short title	Bridge Structure B1 (Replacement A406 Templehof Bridge) Templehof Avenue and sections of Templehof Link Road and High Street South (East Works)	River Brent Bridge 1 and Central and Western River Brent Alteration & Diversion Works	Tilling Road West Re-alignment (Part 1)	Central Brent Riverside Park
<b>a) Explanatory Report (ER)</b>				
Statement to demonstrate compliance with RDSF, DAS and DG	Y	Y	Y	Y
Statement to demonstrate compliance with submission of RM, supporting reports and content of ER	Y	Y	Y	Y
<b>b) Land Uses</b>				
Statement demonstrating compliance of land uses and mix of uses	N/a	N/a	N/a	N/a
Statement demonstrating compliance of affordable housing proposals	N/a	N/a	N/a	N/a
<b>c) Layout</b>				
Report demonstrating compliance of internal noise standards	N/a	N/a	N/a	N/a
Updated Illustrative Reconciliation Plan	Y	Y	Y	Y
<b>d) Scale and design standards</b>				
Statement etc. demonstrating compliance of scale with RDSF, DAS & DG	Y	Y	Y	N/a

Condition 2.1 General RMA Requirements - Short title	Bridge Structure B1 (Replacement A406 Templehof Bridge) Templehof Avenue and sections of Templehof Link Road and High Street South (East Works)	River Brent Bridge 1 and Central and Western River Brent Alteration & Diversion Works	Tilling Road West Re-alignment (Part 1)	Central Brent Riverside Park
Statement demonstrating compliance of design standards for housing	N/a	N/a	N/a	N/a
<b>e) Access</b>				
Statement etc. demonstrating compliance of access with RDSF, DAS & DG	Y	Y	Y	Y
Statement demonstrating compliance of car parking	N/a	N/a	N/a	N/a
Individual Travel Plan	N/a	N/a	N/a	N/a
Details of electric vehicle charging points	N/a	N/a	N/a	N/a
Details of the relevant bus priority measures	Y	N/a	N/a	N/a
Statement confirming finished floor levels and threshold levels	N/a	N/a	N/a	N/a
<b>f) Materials</b>				
Full details of materials to be used on all external surfaces (including hard landscaping)	Y	Y	N/a	Y
Statement demonstrating compliance in the selection of construction materials	Y	Y	N/a	Y
<b>g) Landscaping</b>				
Statement etc. demonstrate compliance of landscaping with RDSF, DAS & DG	N/a	N/a	N/a	Y
Summary of existing tree details	Y	Y	Y	Y

Condition 2.1 General RMA Requirements - Short title	Bridge Structure B1 (Replacement A406 Templehof Bridge) Templehof Avenue and sections of Templehof Link Road and High Street South (East Works)	River Brent Bridge 1 and Central and Western River Brent Alteration & Diversion Works	Tiling Road West Re-alignment (Part 1)	Central Brent Riverside Park
Specification for surface changes	N/a	N/a	N/a	Y
Post construction landscaping near trees	N/a	N/a	N/a	Y
Tree planting	N/a	N/a	N/a	Y
Details of proposed green or brown roofs	N/a	N/a	N/a	N/a
<b>h) Sustainability</b>				
Sustainability/energy statement to demonstrate compliance with sustainability standards and carbon saving targets	N/a	N/a	N/a	N/a
Statement demonstrating feasibility of linking into CHP and District Heating	N/a	N/a	N/a	N/a
Details for linking into the Vacuum Waste Collection System	N/a	N/a	N/a	N/a
Statement demonstrating compliance with the Energy Strategy	Y	Y	Y	Y

2.19 The following sections of this report consider the above in more detail and describe the RMA response to the parameters of the 2014 Permission.

### 3 BRIDGE STRUCTURE B1 (REPLACEMENT A406 TEMPLEHOF BRIDGE) AND TEMPLEHOF AVENUE

#### a) Introduction

- 3.1 In September 2015 resolution to grant permission was secured for the Phase 1A (North) Infrastructure, including Bridge Structure B1 (Replacement A406 Templehof Bridge) and associated Templehof Avenue, was secured. The application drawings that formed the basis of this decision show Bridge Structure B1 consisting of two northbound and two southbound vehicular lanes (one of which is a dedicated bus lane in each direction) as well as pedestrian and cyclist facilities.
- 3.2 During ongoing engagement with the highway authorities, the DPs have investigated an alternative option for the design of Bridge Structure B1 which reduces the width of the bridge by removing the dedicated bus lanes, leaving one vehicular lane for all traffic in each direction. The pedestrian and cyclist facilities are retained.
- 3.3 The alternative design proposal has been considered for three main reasons. Firstly, consideration has been given to the need for the bus lanes given that the northern approach from Bridge Structure B1 to the Western Roundabout does not contain dedicated bus lanes. As a result, the impact on bus journey times is not considered to be significant. Full details of this analysis are contained in the Reserved Matters Transport Report Addendum submitted in support of the RMA.
- 3.4 Secondly consideration has been given to the construction benefits of a reduced width bridge, given the complications of the A406 and the need to maintain a route across the A406. Finally a consideration has been given to where a reduced width bridge will have a reduced construction cost and therefore a deliverability benefit for the project.
- 3.5 It is on the basis of that analysis that the DPs have submitted this alternative proposal for Bridge B1 and associated road infrastructure.

**b) Bridge Structure B1 (Replacement A406 Templehof Bridge)**

3.6 The 2014 Permission defines Bridge Structure B1 (Replacement A406 Templehof Bridge) as follows:

**“Bridge Structure B1 (Replacement A406 Templehof Bridge)” means the creation of a replacement road bridge to provide a link over the A406 to link Market Quarter and Brent Cross East and West Zones to include insofar as reasonably practicable provision for bus lanes, step free access and cycle access (without dismounting) in accordance with the parameters and principles as set out in paragraphs 4.5 and 4.6 of the DSF and the following plans:**

- **Parameter Plan 002;**
- **47067355-A406-12-SK-014 Rev C;**
- **47067355-A406-12-SK-015 Rev B;**
- **47067355-A406-12-SK-016 Rev A;**
- **47067355-A406-12-SK-020A; and**
- **47067355-A406-12-SK-021A.”**

*i) Layout*

3.7 Bridge Structure B1 is a replacement road bridge to provide a link over the A406 North Circular to connect Market Quarter and Brent Cross East and West Zones. The general location of the bridge is identified on Parameter Plans 002 and 003.

3.8 Paragraph 4.4 of the RDSF states that the bridges are to be constructed in accordance with the principles and parameters set out in the RDSF and in general conformity with the relevant Approval in Principle (“AiP”) plans. The parameters in the RDSF typically relate to the length, width and height of the structure, along with other key criteria e.g. piers, lifts/ramps etc. The AiP plans show the application of these parameters alongside an indicative design and other technical information. Therefore, the detailed design of the bridge must be in accordance with the parameters of the RDSF as shown on the AiP plans. The AiP plans do not control the detailed design which is to be approved as part of this RMA process.

3.9 Paragraph 4.5 of the RDSF states that the bridge will have four lanes, two of which will have a public transport priority, as well as pedestrian and cyclist facilities.

- 3.10 Section 2.2.1 of the RDAS states that the new replaced and improved A406 Tempelhof bridge will form the primary connection between the north and south components of the scheme and is limited in its geography by the existing Holiday Inn Hotel and the need to allow head room for vehicles on the A406 below.
- 3.11 Section A3.1 of the RDAS states that the Tempelhof Bridge provides an improved vehicular and bike connection across the A406 North Circular.
- 3.12 Section A3.9 of the RDAS states that Tempelhof Bridge will continue High Street South onto Tempelhof Avenue and provide a principal route for buses, cars, and cycles and pedestrians entering Brent Cross East from Cricklewood. The bridge will offer a multi modal link between north and south, comprising dedicated bus lanes, cycle routes, and pedestrian walkway.
- 3.13 The supporting text to Parameter Plan 002 (paragraph 12) grants the bridge a limit of horizontal deviation of +/-15m. The relevant AiP plans (Plans 47067355-A406-12-SK-014 Rev C, 47067355-A406-12-SK-015 Rev B, 47067355-A406-12-SK-016 Rev A, 47067355-A406-12-SK-020A and 47067355-A406-12-SK-021A) explain the proposed engineering solutions for the bridges based on the parameters set out in the RDSF.
- 3.14 Section B2.2.1 of the RDG provides an illustrative street typology for the route and identifies the A406 Bridge as being a strategic route for vehicular and public transport as well as pedestrians and cyclists.
- ii) Access*
- 3.15 Section 5.1 of the RDAS contains accessibility standards for the development as described above.
- iii) Scale*
- 3.16 Paragraph 4.6 of the RDSF states that the bridge should have a minimum headroom clearance above the A406 of 5.3m and a maximum of 7m. In addition, Parameter Plan 006 requires a Bridge Deck Level of 49.90m over the A406 and grants a +/-2m limit of vertical deviation to this. Paragraph 4.6 continues to state that 3 or 4 intermediate shown on the AIP plans shall be provided (as amended through Condition 2.4) none of which being located between individual lanes of the A406.

3.17 Paragraph 4.6 sets parameters for the detailed design of the bridge, including the overall length between abutments (160-200m) and width (18-34m) of the structure.

iv) Appearance and Materials

3.18 The RDSF sets parameters for the detailed design of the bridge which are described above. Section B4.3.2 of the RDG contains a component schedule to inform the design of the Templehof Bridge, such as utilising large and small pavers for footpaths. Section B4.3.2 also identifies that dedicated bus lanes should have surfaces or to match the footway to the match the vehicular route. However, the RDG is clear that the guidelines “*should represent the starting point for detailed design*” and that they are not “*mandatory but guidance as to what could be appropriate against which alternative proposals can be assessed*” (page 8). The document notes that the LPA will be required to use their planning judgement when considering design proposals but the guidelines frame a set of base conditions and a context on which proposals can be formulated and planning judgements on detailed designs can be based. Therefore, the component schedule does not prescribe that dedicated bus lanes must be provided but rather if they are provided it identifies the type of materials and the conditions that should be considered.

v) Compliance

3.19 The RMA now submitted contains an alternative design for Bridge Structure B1 as shown on BXCR-URS-B1-HS-AP-SE-00001.

3.20 The alternative proposals shows that buses will continue to utilise the replacement bridge travelling north and south, but dedicated bus lanes are not accommodated across the bridge. The bridge provides two lanes for all traffic, rather than 4 lanes (which included bus lanes). These 2 lanes are to be utilised by both public transport and private vehicles. As with the design previously submitted a segregated footway / cycleway will be provided on the western side of the bridge and a footway is provided on the eastern side.

3.21 The RMTR Addendum has been scoped with the highway authorities and prepared to demonstrate that the alternative design proposed does not have a detrimental impact upon the local transport network. The 2021 assessment submitted within the RMTR Addendum demonstrate that the

proposal will have no significant negative impact upon vehicular traffic movement or bus journey times.

- 3.22 Furthermore, to provide additional comfort additional modelling at 2021 and a 2031 assessment are currently being undertaken, the conclusions of which will be submitted for further consultation during the determination period.
- 3.23 As a result of the alternative proposals, the length and width of Bridge Structure B1 will be reduced relative to the previous design. The width is to be reduced as a consequence of removal of bus lanes, whilst the length is reduced by moving the northern abutment south and the southern abutment north. A narrower and shorter bridge means that the new bridge can then be substantially constructed to the east of the existing bridge before the existing structure needs to be demolished which offers potential improvements the construction programme.
- 3.24 As identified on Drawing Ref BXCR-URS-B1-HS-AP-SE-00001 bridge is to measure approximately 160m in length and between 16.3m and 20m in width and will have a minimum clearance of 5.3m above public highways. Therefore, the alternative proposal is marginally (2m) beneath the minimum width parameters.
- 3.25 An application under Conditions 2.4 and 2.5 has been submitted to provide minor amendments to the DSF and DAS to reflect these changes (including removing the requirement to provide dedicate bus lanes across the bridge) which are explained in more detail in the Explanatory Report submitted in support of that application. It will also be necessary to amend the definition of Bridge Structure B1 (Replacement A406 Templehof Bridge) through Condition 1.30 attached to the 2014 Permission via written agreement with LBB.
- 3.26 The bridge deck level is within the defined limit of deviation across the realigned River Brent, Prince Charles Drive and the A406 North Circular Road (the minimum bridge deck level is over River Brent at 49.00m and the maximum bridge deck height is the over A406 North Circular at 51.05m) as identified on Parameter Plan 006.
- 3.27 Overall, the proposed bridge structure is in accordance with the identified parameters and principles of the 2014 Permission (subject to the minor change required under Conditions 2.4 and 2.5) and the alternative design does not have a negative impact on the operation of the highway network.

c) **Templehof Avenue and sections of Templehof Link Road and High Street South (East Works)**

i) Layout

- 3.28 The area Templehof Avenue is the route which provides a link for private vehicles, public transport and pedestrians and cyclists north and south between Market Quarter and Brent Cross East Zones. The route includes Bridge Structure B1 (A406 Templehof Bridge).
- 3.29 It is shown on Parameter Plan 002 as a 'Primary Route' with a limit of deviation +/-35m. Plans 649\_SK\_00\_326 and BXCR-URS-73-ZZ-DR-CE-00002 are relevant for informative/illustrative purposes.
- 3.30 The road is to have a maximum back of pavement to back of pavement width of 34m and a minimum of 13m, of which pedestrian footways will be a minimum of 2.5m wide (as amended through Condition 2.4 Ref.No. 15/00664/CON).
- 3.31 Templehof Link Road connects Claremont Avenue and Templehof Avenue within the Market Quarter Zone. It is shown on Parameter Plan 002 as a 'Primary Route' with a limit of deviation of +/-35m. Plans 649\_SK\_00\_326 and BXCR-URS-73-ZZ-DR-CE-00002 are relevant for informative/illustrative purposes.
- 3.32 High Street South (East Works) is the route connecting Claremont Avenue and Templehof Avenue forming the western extension of Market Square. This section of High Street South is shown on Parameter Plan 002 as a being a Public Transport Route only in the completed scheme configuration with a limit of deviation of +/-40m. Parameter Plan 003 identifies the route as forming part of Market Square (M2). Plans 649\_SK\_00\_326 and BXCR-URS-73-ZZ-DR-CE-00002 are relevant for informative/illustrative purposes.
- 3.33 The RDG also provides street typology descriptions. These typologies are intended to provide a general guide (not a detailed or fixed definition) of the final condition as built and the over-arching character of the streetscape that is under consideration.

ii) Access

- 3.34 Section 5.1 of the RDAS contains accessibility standards for the development. The RDAS states that there is a commitment to follow current good practice standards, including 'Inclusive Mobility' (2005) and BS 8300:2009+A1:2010, when designing all of the infrastructure projects (p.158). In accordance with the RDAS these standards will be applied to all pedestrian routes where possible (p.160). The RDAS also states that tactile surfaces will be used to warn and guide visually impaired people (p.162).
- 3.35 In addition to the accessibility standards for the development which are to be applied where possible, Templehof Avenue is identified on Parameter 003 as being a main connection, which forms part of the principle circulation corridors for pedestrians and cyclist, and is a strategic route.

iii) Appearance and Materials

- 3.36 Section 4.3.2 of the RDG contains a component schedule which provides a specification relating to types of planting, surfacing material, street furniture, public art and water features, threshold treatments, edge treatments and facilities to inform the design of the route. The schedule identifies a tarmac vehicular corridor and footway material of stone, brick or concrete large and small pavers as being suitable potential materials.

iv) Compliance

- 3.37 The area of Templehof Avenue relevant to this RMA is identified on Drawing Ref Nos. BXC-URS-AH-RM-DR-CE-00007, BXC-URS-AH-RM-DR-CE-00008 and BXC-URS-AH-RM-DR-CE-00014. Matters related to Bridge Structure B1 are covered earlier in this section and therefore are not repeated below.
- 3.38 As identified on the drawings the proposed Tempelhof Avenue will continue to provide a link between Market Square and the Western Roundabout across the A406 Tempelhof Bridge. Northbound vehicles will be able to access the Western Roundabout from High Street South via Tempelhof Avenue, while southbound vehicles will continue to exit the bridge onto Tempelhof Avenue and then either turn onto Tempelhof Link Road to access Tilling Road or continue southwards towards Claremont Avenue.

- 3.39 The proposed route is within the L.O.D +/- 35m limit of deviation as identified on Parameter 002. Also, the proposed finished site level is within the L.O.D of +/- 1m limit of deviation as identified and have not changed from those in the approved RMA (46.21m at the northern toucan, 47.99m at the junction with Templehof Link Road and 46.22m at the junction with High Street South (East Works)).
- 3.40 A segregated cycle / footway will continue to run along the western side of Tempelhof Avenue which will extend over A406 Tempelhof Bridge (Drawing Ref Nos. BXC-URS-AH-RM-DR-CE-00007, BXC-URS-AH-RM-DR-CE-00008 and BXC-URS-AH-RM-DR-CE-00014).
- 3.41 Tempelhof Avenue typically has a 5m segregated footway/cycleway, a carriageway of between 20.6m and 15m, and a 2.5m pedestrian footway which is in accordance with the parameters as amended. The width of Tempelhof Avenue across the A406 from back of pavement to back of pavement is typically approximately 15m which is within the width measurement thresholds.
- 3.42 Tempelhof Avenue has been modified from four traffic lanes to two traffic lanes and the central island removed. As such, there has been a change in lane configuration to the north of the bridge along Tempelhof Avenue at the toucan crossing which has been reduced from being 3 lanes wide to 2 lanes. Beyond the toucan crossing, 2 lanes widen to 3 lanes on the approach to the western roundabout (Please see Drawing Ref No BXC-URS-AH-RM-DR-CE-00007).
- 3.43 To the south of the bridge Tempelhof Avenue has also been modified from four lanes to two and the central island removed. Therefore, at the junction with High Street South (East Works), the alignment has been modified to suit this alternative proposal and the radius has been eased to be at least 20m and visibility has changed to provide 50m stopping sight distance (Please see Drawing Ref No BXC-URS-AH-RM-DR-CE-00014).
- 3.44 The alignment of the vehicle restraint system on Tempelhof Avenue and Tempelhof Link Road has also been modified to suit the proposed highway alignment and Tempelhof Link Road has been marginally realigned to suit the new two lane configuration on Tempelhof Avenue.
- 3.45 Both the modified sections of High Street South (East Works) and Tempelhof Link Road are within parameters, have been designed to have a gradient of greater than 1:20 and have the same dimensions as the approved RMA details. Tempelhof Link Road continues to have a 10.2m

carriageway and a footway measuring between 9m and 2.5m on the northern side of the route a footway measuring 2m on the southern side of the route.

- 3.46 Tactile paving is provided at the toucan crossing within the northern section of Templehof Avenue (Drawing Ref BXC-URS-AH-RM-DR-CE-00007). The route has been designed in accordance with the accessibility standards for the development (Section A5.1 of the RDAS) and generally provides a gradient of less than 1:20.
- 3.47 In relation to the materials to be utilised along the route, these details will be provided as part of the technical approval process in consultation with LBB and TfL to meet normal highway standards.
- 3.48 In summary, Bridge Structure B1 and Templehof Avenue are consistent with the parameters of the 2014 Permission subject to the following minor updates which form part of an application under Conditions 2.4 and 2.5:
- Minor amendments to the wording of the DSF and DAS regarding the dedicated bus lanes; and
  - Minor changes to the scale thresholds for the Bridge Structure B1.

## 4 TILLING ROAD WEST RE-ALIGNMENT AND DIVERSION (PART 1)

### a) Introduction

4.1 An alternative design has been prepared for Tilling Road West Re-alignment and Diversion (Part 1) where it meets the junction with Brent Terrace North. The proposals enables the junction to be more closely aligned with the existing junction, reducing the need for temporary tie in works.

#### i) Layout

4.2 Tilling Road West Re-alignment and Diversion (Part 1) forms the alterations to the existing Tilling Road west of the new Claremont Avenue. It is shown on Parameter Plan 002 as an 'Existing Adopted Highway (or part of to be improved, realigned and/or extended)'. Plans 649\_SK\_00\_326 and BXCR-URS-73-ZZ-DR-CE-00002 are relevant for informative/illustrative purposes.

4.3 The junction at Brent Terrace North is identified on Parameter Plan 002 as being a "New Junction".

4.4 Brent Terrace North is identified as being a Secondary Route (Street) on Parameter Plan 002. The supporting text states that streets will be defined at reserved matters stage and will have a maximum building line to building line width of 21m and minimum width of 11m, of which pedestrian footways will be a minimum of 2m.

#### ii) Access and Appearance and Materials

4.5 Further to the accessibility standards for the development identified in Section 5.1 of the RDAS, which states that standards within BS 8300, Manual for Streets and Inclusive Mobility should be applied to the route where possible, there are no specific parameters or principles within the planning permission relating to access and appearance and materials.

iii) Compliance

- 4.6 The Brent Terrace North and Tilling Road West Junction proposed in the approved RMA is located a short distance west of the existing roundabout and a section of new carriageway is provided to tie in with the existing Brent Terrace North.
- 4.7 The revised Brent Terrace North and Tilling Road West Junction is identified on Drawing Ref BXC-URS-AH-RM-DR-CE-00013 and follows the existing Brent Terrace North alignment where possible and in this manner has an improved relationship with existing properties located along this route. The junction is in the location as identified on Parameter Plan 002.
- 4.8 The proposed new section of Brent Terrace North which will link to the existing route measures between 20.3m and 16.3m in width with footways of 3.5m reducing in width to meet the existing footpath.
- 4.9 The highway landscaping relating to this element of highways are identified on Drawing Ref No. 1065-06-10. A highways landscape Implementation Works Programme as required with Condition 27.6 has been submitted and is attached at **Appendix 1**. As stated on the programme it is anticipated that a condition will be imposed on the RMA decision notice enabling changes as a result of the approved Detailed Delivery Programme under Condition 5.1 or other minor changes, to be submitted and approved by officers.
- 4.10 In summary, the proposed alternative works are in accordance with the 2014 Permission (as amended).

## 5 RIVER BRIDGE 1, RIVER DIVERSION AND NATURE PARK NP5

### a) Introduction

- 5.1 Following the approval of the detailed design for River Bridge 1 (as part of Phase 1A (North) Infrastructure package) consideration has been given to matters of buildability/construction. Through this process it has become clear that the southern abutment of the bridge sits within the existing river channel. This unnecessarily complicates the construction process as temporary river diversions would be required before the abutment could be constructed.
- 5.2 Therefore, to improve buildability of the bridge the alternative proposal now submitted seeks to move the northern and southern abutments of the bridge south to avoid the existing river channel. This alteration has no impact on the road layout above the bridge which remains unchanged.
- 5.3 The repositioning of the abutments of River Brent Bridge 1 also requires the realignment of the proposed channel slightly to the south over a length of approximately 90m where it passes beneath the bridge.
- 5.4 The amendments to the river channel results in a limited amendment to Nature Park NP5 and a section of Central Brent Riverside Park under River Bridge 2, which is very similar to that previously approved.

### b) River Bridge 1

#### *i) Layout, Access and Scale*

- 5.5 The general location of River Bridge 1 within the western roundabout is shown on Parameter Plan 011. Paragraph 4.23 of the RDSF states that the bridge is for use by vehicles only.
- 5.6 Paragraph 4.23 of the RDSF (as amended by Condition 2.4) states that vehicular bridges will have a length, width and height thresholds of 16 - 48m, 8 - 39m and 600mm – 3,600mm (above the 100 yr plus climate change water level) respectively .
- 5.7 Parameter Plan 11 identifies Proposed Approximate Level of Crossing Points for the bridge as being 42.5 which is subject to a vertical limit of deviation of +/-1m.

5.8 Paragraph 4.24 states that a number of bridge principles are to be adhered to as far as is practicable and any alterations sought at a specific locations will be discussed directly with the EA in the context of seeking detailed design approval. The principles include clear span from bank top to bank top; abutments clear of flood channel; and soffit level 600mm above the 100 yr plus climate change water level.

*ii) Appearance and Materials*

5.9 The RDSF sets parameters for the detailed design of the bridge which are described above. It states that all structures should have clear spans from bank top to bank top and that abutments should be clear of flood channel (Paragraph 4.24). Compliance

5.10 The alternative bridge design is identified on Drawing Ref No BXCR-URS-C1-XX-AP-SE-00001. The repositioning of the northern and southern abutments south has increase length of the bridge by approximately 4m from that in the approved RMA (the bridge measures 23m in length in the approved RMA). Although the width of the bridge above the centre of the river channel has been reduced slightly (from 21.8m in approved RMA to 20.1m), the road layout above remain unchanged.

5.11 The length of the alternative bridge is 27m, with a minimum width of 18m and a maximum width of 29.4m. The minimum freeboard height is 1,400m and the maximum is 2,200m. The soffit level is to be at least 600mm above the 1 in 100 year flood level, including climate change. Also, the levels of crossing points are identified as being between 42.3m and 43.1m and the abutments are clear of the flood channel.

5.12 Therefore, proposed bridge structure is in accordance with the identified parameters and principles of the 2014 Permission (as amended).

**c) Central and Eastern River Brent Alteration & Diversion Works**

*i) Layout and Access*

5.13 The outline design of the River Brent realignment consists of three relatively distinct reaches. It is proposed to undertake alteration and diversion works to the eastern (Reach 1), central (Reach 2) and western (Reach 3) sections of the River Brent that run through the site. This encompasses the stretch

of the river between the M1 slip road onto the A406 North Circular in the West and the A41 Brent Cross flyover in the east (Section A3.9 of the RDAS).

5.14 Paragraph 3.4 of the RDSF states that the application proposes to modify and enhance the section of the River Brent that runs through the site. The works to the central and western sections include:

- Diversion and re-alignment of the central section adjacent to the new Bus Station, including removing the existing channel form, realignment of new channel to the south to create a three-stage widened channel with natural bed type and semi-natural bedform.
- Works to the western section will involve the removal of the existing channel form, widening of the river corridor to create a three-stage trapezoidal channel and maximisation of the river corridor to provide for riparian habitat creation. Backwaters and wetland scrapes will be encouraged where appropriate.

5.15 The supporting text to Parameter Plan 011 (paragraphs 4 to 23) contains information about the width of the river channel and the width and location of pedestrian and cycle paths and connections between upper and lower levels of paths via steps and ramps.

5.16 In the central section, the overall channel width will be typically 22m unless detailed design shows otherwise and the low flow channel will extend through this reach. Within the western reach the overall channel is to be approximately 32m in width and is so for the whole of the reach unless detail

5.17 Section B3.2.4 of the RDG states that the realignment of the existing river is to include improvements to the flow and water quality.

*ii) Compliance*

5.18 As identified on BXCR-URS-RB-XX-DR-HD-00010 proposed alternative realignment starts at the downstream side of the planned backwater feature inside the western roundabout (Nature Park 5) within Reach 2 and concludes around 40m upstream of River Brent Bridge 10 within Reach 3. The realignment moves the centreline of the river to the south by between 5m to 6m. Outside of this area, as defined on BXCR-URS-RB-XX-DR-HD-00010, the realignment is unchanged.

- 5.19 As detailed in the Hydraulic Note the alternative realignment is unlikely to have any implications from a flooding perspective. To confirm this, the revised alignment is currently being analysed in the hydraulic model which will demonstrate no detrimental impact from this change on the flood risk for the channel or adjacent areas. This information will be available prior to the determination of the RMA and the Environment Agency are being consulted.
- 5.20 In relation to the channel widths (which are taken as being from the face of the south retaining wall to the back edge of the northern of the footpath) these not change from those in the approved RMA with widths within Reach 2 varying between 16m and 23m and within Reach 3 around 31m. These width dimensions are in part larger than the 'typical' figures set out in the DSF, however, the DSF wording is qualified to recognise that they may change as a result of detailed design. As a result the proposals are consistent with the parameters.
- 5.21 Overall the diversion works are in accordance with the parameters and principles as defined in the 2014 Permission, alongside the modifications proposed under Condition 2.4

**d) Central Brent Riverside Park and Nature Park NP5**

*i) Landscape and Access*

- 5.22 The Central Brent Riverside Park, including Nature Park NP5, forms part of Phase 1A (North). The key features of this central section is a two stage channel profile with instream restoration features, naturalised revetments where possible, native riparian planting/seeding and a combined EA access and footpath/cycleway (PROSS, p. 125).
- 5.23 Section B.3.2.3 of the RDG states that provision should be made for the Nature Parks to be an educational facility and there should be an emphasis on using reclaimed and recycled materials and planning species should be native and/or wildlife friendly. Furthermore, Nature Park is to measure 0.13ha (as amended under Condition 2.4).
- 5.24 The details for the Eastern and Western Brent Riverside Park form part of the Phase 1B (North) RMA.

e) Compliance

- 5.25 The proposed alternative realignment of this limited section of river to the east of the western roundabout does not reduce the area of Nature Park 5 to be provided (0.12ha). The
- 5.26 The alternative design is shown on Drawing Ref No 1065-03-006 which identifies that limited change from the approved RMA is proposed. The channel being shifted further south has meant that the gabions within the channel have also moved further south and the northern pavement has been slightly realigned.
- 5.27 The landscaping within this nature park continues to provide and an area of ecological enhancements & backwater, with seating provided on the northern bank and the planting is to be of native species as identified on Drawing Ref. Nos. 1065-03-006, 1065-03-206, 1065-03-432 and 1065-03-437.
- 5.28 A landscape Implementation Works Programme for this section of Nature Park NP5 as required with Condition 27.6 has been submitted and is attached at **Appendix 2**. As stated on the programme it is anticipated that a condition will be imposed on the RMA decision notice enabling changes as a result of the approved Detailed Delivery Programme under Condition 5.1 or other minor changes, to be submitted and approved by officers.
- 5.29 The details of landscaping to the west of River Brent Bridge 1 will come forward with the Phase 1B North RMA.
- 5.30 In summary, the alternative design of River Bridge 1, river corridor works and amendment to Nature Park NP5 in Phase 1A are consistent with the parameters of the 2014 Permission

## 6 SUSTAINABILITY AND ENGERY

- 6.1 The proposals for the redevelopment of BXC are founded on a variety of sustainability features which will guide the implementation of the scheme which are categorised in the RDSF as being provided site wide (the most pertinent of which are summarised in Table 8 of the RDSF).
- 6.2 Please find the proposed sustainability and energy measures proposed associated with the various RMA submissions attached at **Appendix 3**. This is the same information submitted with the approved RMAs as it remains unchanged.

## 7 ENVIRONMENTAL COMPLIANCE

- 7.1 The 2014 Permission was subject to an Environmental Impact Assessment (EIA) process undertaken in line with The Town and Country Planning (Environmental Impact Assessment) Regulations 2011 and was reported in the Environmental Statement (ES) dated October 2013 (BXC02).
- 7.2 The ES Addendum to the Revised ES Further Information Report (Volume 3) has been prepared to provide, where necessary, further environmental review and assessment pursuant to the October 2013 ES and Revised ES Further Information Report June 2015, as considered necessary to inform the granting of the alternative RMAs.
- 7.3 Please refer directly to the ES Addendum report for the environmental compliance of the various Phase 1A North infrastructure items.
- 7.4 It should be noted that further assessment may be required upon receipt of the completed transport modelling for the end state 2031 for the BXC Scheme with the alternative RMAs incorporated. Once issued a further environmental review and possible further assessment will be undertaken and where necessary additional information will be provided to LBB to inform the RMAs determination.



## 8 CONCLUSIONS

- 8.1 This Explanatory Report demonstrates that the RMA details for the four separate RMAs are in accordance with the relevant parameters, principles and other controls included in the 2014 Permission (as amended) when considered alongside the minor amendments proposed in an application under Condition 2.4 and 2.5.



## APPENDIX 1

# Landscape Infrastructure Implementation Works Programme

Document ref 1065-06-SH-010

**Revision: C**

**Date: 28.05.2015**

**Issued by: GJ**

This programme has been prepared based on the best information available at this stage. It is anticipated that a condition will be imposed on the RMA decision notice for Phase 1A (North) Tilling Road West realignment and diversion (Part1) RMA that any revisions to this programme as a result of the approval of the Detailed Delivery Programme under Condition 5.1 or for any other minor revisions will be capable of being submitted and approved by officers.

Key Items		Month 1	Month 2	Month 3 - 43	Month 44	Month 45	Month 46	Month 47	Month 48	Month 49	Month 50	Month 51	Month 52	Month 53	Month 54	Month 55
	<b>Site Operations Landscape Infrastructure</b>															
1	Contractor Mobilisation	■														
2	Erection of Protective Fencing to Trees and Vegetation to be Retained	■														
3	Tree and Shrub Clearance <i>To be carried outside of the Bird Nesting Season</i>	■	■													
4	Earthworks - General	■	■	■							■	■	■	■	■	
5	Engineering Works		■	■	■	■	■	■	■	■	■	■	■	■	■	■
6	Construction of Paths/ Hard Landscape Areas					■	■	■	■	■	■	■	■	■	■	
7	Seeding								■	■	■				■	■
8	Tree Planting															■
9	Practical Completion															■



## APPENDIX 2

# River Brent Park Landscape Implementation Works Programme



Document ref 1065-03-SH-010

**Revision: B**  
**Date: 28.05.2015**  
**Issued by: GJ**

This programme has been prepared based on the best information available at this stage. It is anticipated that a condition will be imposed on the RMA decision notice for Phase 1A North Central Brent Riverside Park RMA that any revision to this programme as a result of the approval of the Detailed Delivery Programme under Condition 5.1 or for any other minor revisions will be capable of being submitted and approved by officers.

Key Items		Month 1	Month 2	Month 3 - 43	Month 44	Month 45	Month 46	Month 47	Month 48	Month 49	Month 50	Month 51	Month 52	Month 53	Month 54	Month 55
	<b>Site Operations River Brent Park Landscape</b>															
1	Contractor Mobilisation	■	■													
2	Erection of Protective Fencing to Trees and Vegetation to be Retained	■	■													
3	Tree and Shrub Clearance To be carried outside of the Bird Nesting Season		■													
4	Earthworks - Bulk		■	■												
5	Engineering Works			■	■	■	■	■	■	■	■	■	■	■	■	■
6	Soiling				■	■	■	■	■	■	■	■	■	■	■	■
7	Construction of Paths/Hard Landscape Areas					■	■	■	■	■	■	■	■	■	■	■
8	Turf Reinforcement Mats							■	■	■						
9	Willow staking							■	■	■						
10	Seeding								■	■					■	■
11	Tree Planting														■	■
12	Shrub planting														■	■
13	Aquatic planting														■	■
14	Practical Completion															■



## APPENDIX 3

# PHASE 1A CENTRAL BRENT RIVESIDE PARK

## SUSTAINABILITY & ENERGY

### (a) Planning Requirements

The proposals for the redevelopment of BXC are founded on a variety of sustainability features which will guide the implementation of the scheme which are categorised in the RDSF as being provided site wide (the most pertinent of which are summarised in Table 8 of the DSF) and those provided by developers of each plot/stage of the development (the most pertinent of which are summarised in Table 9) of the DSF.

The key sustainability commitments for the development of Central Brent Riverside Park, are identified as follows:

#### Materials

- Implement Construction Environmental Management Plans;
- Undertake pre-demolition audits for all buildings;
- Reuse at least 70% demolition arisings, audited using ICE Demolition Protocol;
- Adhere to the Code of Construction Practice;
- Register each contract under the Considerate Constructors Scheme
- 90% of timber to be obtained from a sustainable source Forest Stewardship Council (FSC);
- Use no peat or natural weathered limestone;
- Construction materials will have at least 10% recycled content (by value);
- Avoid using materials that deplete the Ozone layer and that contribute to global warming;

#### Operational waste

- Compostable waste will be segregated for composting. Green waste from parks, gardens and open spaces will be composted locally, and used beneficially on site;

#### Drainage

- Sustainable Drainage Strategy using paved areas within the Riverside Park to accommodate floodwater during rainfall events with a return period of greater than 1 in 5 years in order to maximise the capacity of the third stage river channel and thereby minimise flood risk.

### b) Proposed Sustainability Measures

TOPIC	PROPOSED SUSTAINABILITY MEASURE
<b>Materials</b>	
Implement Construction Environmental Management Plans;	The CEMP will be finally developed during detailed design after planning permission has been granted and implemented by the contractor who is yet to be appointed.
Undertake pre-demolition audits for all buildings;	Pre-demolition audits will be undertaken for all buildings demolished, and the results used to inform / contribute to the reuse of materials (following topic) and the requirement to use more than 10% recycled content materials in new construction;

<p>Reuse at least 70% demolition arisings, audited using ICE Demolition Protocol;</p>	<p>This requirement addresses both demolition arisings and excavated material, as detailed in the Demolition Protocol. This will be undertaken and documented by the contractor(s) when work begins on site.</p>
<p>Adhere to the Code of Construction Practice;</p>	<p>The CoCP will be finally developed during detailed design after planning permission has been granted and implemented by the contractor who is yet to be appointed.</p>
<p>Register each contract under the Considerate Constructors Scheme</p>	<p>This will be undertaken by the contractor when work begins on site.</p>
<p>90% of timber to be obtained from a sustainable source Forest Stewardship Council (FSC);</p>	<p>This includes timber used in final construction as well as timber for temporary works and falsework. 90% of such timber should be reclaimed, re-used or responsibly sourced.</p> <p>It is now generally accepted that a 'green supply chain' can allow timber from a Forest Stewardship Council (FSC) accredited source <i>or an equivalent</i>. This is detailed in Code for Sustainable Home guidance (<i>Table: Cat 3.1 Tier Levels</i>), as follows:</p> <p>"FSC, CSA, SFI with CoC, PEFC, Reused Materials, Schemes compliant with BES6001:200861 (or similar) Excellent and Very Good Performance Ratings"</p> <p>(CSA - Canadian Standards Association; SFI with CoC - Sustainable Forestry Initiative with Chain of custody; PEFC - Programme for the Endorsement of Forest Certification Schemes)</p> <p>Timber used in construction will be sourced in accordance with guidance provided in Code for Sustainable Home guidance in <i>Checklist Man 3: Construction Site Impacts</i>.</p> <p>Appropriate timber will be specified during detailed design stage, and sourced and installed by the contractor as construction progresses. The contractor will provide appropriate verification of the sourcing of timber.</p>
<p>Use no peat or natural weathered limestone;</p>	<p>No peat or weather limestone will be used.</p>
<p>Construction materials will have at least 10% recycled content (by value);</p>	<p>Materials for new construction will have a recycled content of at least 10%. Suitable materials will be specified during detailed design stage and implemented by the contractor as construction progresses. The recycled content will be verified using the Net Waste Tool available from, and run by WRAP (Waste and Resources Action Programme).</p>
<p>Avoid using materials that deplete the Ozone layer and that contribute to global warming;</p>	<p>With regard to infrastructure this requirement addresses the use of expanded polystyrene inserts in formwork for concrete, which must not be manufactured using materials which contribute significantly to Global warming. The permitted materials are given in Code for Sustainable Homes guidance for Category 6 Pollution in <i>Table: Cat 6.2: Blowing agents deemed to satisfy the issue requirements and/or believed to have a GWP of less than 5</i>.</p>

Operational waste	
<p>Compostable waste will be segregated for composting. Green waste from parks, gardens and open spaces will be composted locally, and used beneficially on site;</p>	<p>Compostable waste will be segregated for composting. Green waste from parks, gardens and open spaces will be composted locally, and used beneficially on site;</p>
Drainage	
<p>Sustainable Urban Drainage Strategy using paved areas within the Riverside Park to form part of the third stage river channel in order to minimise flood risk.</p>	<p><b>Brent Riverside Park</b></p> <p>A paved route is proposed to be constructed on the northern side of the river channel to accommodate pedestrians, cyclists and Environment Agency maintenance vehicles. A vertical concrete wall will be provided to prevent this route from flooding during events with a return period of up to 1 in 5 years. However, the paved route will be permitted to flood during more extreme events in order to maximise the capacity of the third stage river channel and thereby minimise flood risk to the adjoining development.</p> <p>A new drainage network will be provided to intercept surface water from the paved route and to direct it to the river channel. This drainage network will be designed to enable floodwater to be effectively directed off the path into the main channel to enable the paved route to be quickly reopened following a major flood event. Non-return valves will also be provided on drainage outfalls to prevent floodwater from inundating the paved route when water levels are elevated within the river channel.</p> <p>Given the frequency that the paved route will flood and the infrequent nature of vehicular trafficking, it will not be practical or necessary to incorporate Sustainable Drainage Systems within the drainage network to attenuate and improve the quality of runoff.</p>

# PHASE 1A INFRASTRUCTURE

## SUSTAINABILITY & ENERGY

### (a) Planning Requirements

The proposals for the redevelopment of BXC are founded on a variety of sustainability features which will guide the implementation of the scheme which are categorised in the RDSF as being provided site wide (the most pertinent of which are summarised in Table 8 of the DSF) and those provided by developers of each plot/stage of the development (the most pertinent of which are summarised in Table 9) of the DSF.

The key sustainability commitments for the development of infrastructure of the BXC site, including roads and bridges, are identified as follows:

### Materials

- Implement Construction Environmental Management Plans;
- Undertake pre-demolition audits for all buildings;
- Reuse at least 70% demolition arisings, audited using ICE Demolition Protocol;
- Adhere to the Code of Construction Practice;
- Register each contract under the Considerate Constructors Scheme
- 90% of timber to be obtained from a sustainable source Forest Stewardship Council (FSC);
- Use no peat or natural weathered limestone;
- Construction materials will have at least 10% recycled content (by value);
- Avoid using materials that deplete the Ozone layer and that contribute to global warming;

### Energy and carbon emissions

- Connect all principal residential buildings to the district heat network, where feasible to do so;
- Connect non-domestic buildings to the district heat network, if elected, subject to feasibility and viability;

### Drainage

- Sustainable Urban Drainage Strategy using attenuation basins and tanks and porous paving to achieve a 25% reduction of the current 1:100 year return flow plus climate change compared to that for the existing site.

### b) Proposed Sustainability Measures

TOPIC	PROPOSED SUSTAINABILITY MEASURE
<b>Materials</b>	
Implement Construction Environmental Management Plans;	The CEMP will be finally developed during detailed design after planning permission has been granted and implemented by the contractor who is yet to be appointed.
Undertake pre-demolition audits for all buildings;	Pre-demolition audits will be undertaken for all buildings demolished, and the results used to inform / contribute to the reuse of materials (following topic) and the requirement to use more than 10% recycled content materials in new construction;

<p>Reuse at least 70% demolition arisings, audited using ICE Demolition Protocol;</p>	<p>This requirement addresses both demolition arisings and excavated material, as detailed in the Demolition Protocol. This will be undertaken and documented by the contractor(s) when work begins on site.</p>
<p>Adhere to the Code of Construction Practice;</p>	<p>The CoCP will be finally developed during detailed design after planning permission has been granted and implemented by the contractor who is yet to be appointed.</p>
<p>Register each contract under the Considerate Constructors Scheme</p>	<p>This will be undertaken by the contractor when work begins on site.</p>
<p>90% of timber to be obtained from a sustainable source Forest Stewardship Council (FSC);</p>	<p>This includes timber used in final construction as well as timber for temporary works and falsework. 90% of such timber should be reclaimed, re-used or responsibly sourced. It is now generally accepted that a 'green supply chain' can allow timber from a Forest Stewardship Council (FSC) accredited source <i>or an equivalent</i>. This is detailed in Code for Sustainable Home guidance (<i>Table: Cat 3.1 Tier Levels</i>), as follows:          "FSC, CSA, SFI with CoC, PEFC, Reused Materials, Schemes compliant with BES6001:200861 (or similar) Excellent and Very Good Performance Ratings"          (CSA - Canadian Standards Association;          SFI with CoC - Sustainable Forestry Initiative with Chain of custody;          PEFC - Programme for the Endorsement of Forest Certification Schemes)          Timber used in construction will be sourced in accordance with guidance provided in Code for Sustainable Home guidance in <i>Checklist Man 3: Construction Site Impacts</i>.          Appropriate timber will be specified during detailed design stage, and sourced and installed by the contractor as construction progresses. The contractor will provide appropriate verification of the sourcing of timber.</p>
<p>Use no peat or natural weathered limestone;</p>	<p>No peat or weather limestone will be used.</p>
<p>Construction materials will have at least 10% recycled content (by value);</p>	<p>Materials for new construction will have a recycled content of at least 10%. Suitable materials will be specified during detailed design stage and implemented by the contractor as construction progresses. The recycled content will be verified using the Net Waste Tool available from, and run by WRAP (Waste and Resources Action Programme).</p>
<p>Avoid using materials that deplete the Ozone layer and that contribute to global warming;</p>	<p>With regard to infrastructure this requirement addresses the use of expanded polystyrene inserts in formwork for concrete, which must not be manufactured using materials which contribute significantly to Global warming. The permitted materials are given in Code for Sustainable Homes guidance for Category 6 Pollution in <i>Table: Cat 6.2: Blowing agents deemed to satisfy the issue requirements and/or believed to have a GWP of less than 5</i>.</p>

<p><b>Energy and Carbon Emissions Strategy</b></p>	
<p>Connect all principal residential buildings to the district heat network, where feasible to do so</p>	<p>As part of Phase 1A, district heating pipework is being installed to the west side of the Brent Cross shopping centre, at plots 113 to permit future connection to heat network. At Tempelhof Bridge sleeving is being provided within the bridge which allows the connection through the bridge to be made at a later date. South of Tempelhof bridge, district heating pipework is being installed running from the bridge down to High Street South, from where it branches east and west, running east to plot 28 and north to plot 93. Both these plots are provided with sleeved ends to enable future connection to the district heat network.</p>
<p>Connect non-domestic buildings to the district heat network, if elected, subject to feasibility and viability;</p>	<p>As above</p>
<p><b>Drainage</b></p>	
<p>Sustainable Urban Drainage Strategy using detention basins within landscaped areas and oversized pipes below new roads to achieve a 25% reduction of the current 1:100 year return flow plus 20% for climate change compared to that for the existing site.</p>	<p>New highway drainage systems are proposed to intercept, attenuate and improve the quality of surface water runoff from the highways that will be constructed as part of the Phase 1AN development.</p> <p>Sustainable Drainage Systems will be incorporated within the new highway drainage networks in order to allow the peak discharge rates from rainfall events with a return period of up to and including 1:100 years plus climate change to be reduced by 25%. Detention basins will be provided within landscaped areas that are situated within the perimeter of adopted highways, such as the M1 junction and the eastern roundabout. Oversized pipes will be provided upstream of flow controls to attenuate surface water that is intercepted from highways that do not have landscaped areas. The oversized pipes will not improve the quality of surface water alone; therefore separators and filtration chambers will be incorporated within the network to allow suspended solids and hydrocarbons to be removed.</p> <p>The new highways will be offered for adoption by different Highway Authorities and separate highway drainage systems will be provided to ensure that all systems are maintained.</p>