CampbellReith
consulting engineers

3 Aldred Road
London NW6 1AN

Basement Impact Assessment Audit

For

London Borough of Camden

Project Number: 12066-60
Revision: D2

January 2016

Campbell Reith Hill LLP
Friars Bridge Court
41-45 Blackfriars Road
London
SE1 8NZ

T:+44 (0)20 7340 1700
F:+44 (0)20 7340 1777
E:london@campbellreith.com
W:www.campbellreith.com

Document History and Status

Revision	Date	Purpose/Status	File Ref	Author	Check	Review
D1	23/10/15	Comment	PCDjw12066-60-231015-3 Aldred Road-D1 .doc	P C Daniels	E M Brown	E M Brown
D2	19/01/16	Comment	PCDjw12066-60-180116-3 Aldred Road-D2 .doc	P C Daniels	E M Brown	E M Brown

Document Details

Last saved	21/01/2016 14:10
Path	PCDjw12066-60-180116-3 Aldred Road-D2 .doc
Author	P C Daniels BSc MSc CEng MICE
Project Partner	E M Brown, BSc MSc CGeol FGS
Project Number	12066-60
Project Name	3 Aldred Road, London NW6 1AN
Planning Reference	2015/3109/P

Contents

Appendix

1.0 NON-TECHNICAL SUMMARY

1.1. CampbellReith was instructed by the London Borough of Camden (LBC) to carry out an audit on the Basement Impact Assessment (BIA) submitted as part of the Planning Submission documentation for 3 Aldred Road, London NW6 1AN - Planning Reference 2015/3109/P.

1.2. CambellReith accessed the LBC Planning Portal and reviewed the latest revisions of submitted documentation against an agreed audit check list.

1.3. The Audit reviewed the BIA for potential impacts on land stability and local surface and groundwater conditions arising from the proposed basement development in accordance with LBC's policies and technical procedures.

1.4. Subsequent to the issue of the above initial audit, a number of clarifications and confirmations have been issued. This current audit constitutes a revision to the original CampbellReith audit, amended as necessary, to accommodate the clarifications and confirmations received.

1.5. A revised BIA has not been formally issued but the original BIA will be construed by CampbellReith as having been amended in accordance with the contents of the above additional documentation. Any references in this audit to the revised BIA shall be taken as a reference to the original BIA updated as above.

1.6. The revised BIA has not been taken beyond the screening stage as defined in the LBC Planning Guidance document 'Basements and Lightwells' (CPG4), dated July 2015.

1.7. The qualifications of the authors, checkers and approvers of the revised BIA are in compliance with the requirements of CPG4.

1.8. The foundations to the property were found to generally comprise corbelled brickwork footings bearing directly on the soil sub-stratum but set at a number of different levels.

1.9. The proposed basement works comprise the deepening of the existing underground spaces by 1.315m. However, the extended basement will be founded 3.5m or so below the level of the front garden paving.

1.10. No information has been supplied within the BIA on the presence or otherwise of adjacent basements. This information should be provided.

1.11. Assuming that adjacent properties do not have basements, the differential depth of foundations relative to neighbouring properties will be less of a concern within the main basement areas but much more significant in the front garden area where excavations will be undertaken to a significant depth below existing ground level.

1.12. Ground conditions at the site have been confirmed to comprise Made Ground to 3m bgl, overlying London Clay. A perched water table is anticipated in the Made ground.

1.13. The revised BIA has recommended that due to the potential for perched water in the Made Ground, waterproofing should be installed to the basement and that provision should be made for local dewatering during construction. This is accepted.

1.14. The revised BIA has confirmed that although the London Clay is the shallowest 'natural' stratum at the site, the stratum occurs at depth and there is no evidence of shrink/swell effects in local buildings. Also, there are no significant trees along the street frontage or in the back garden to the property. Nevertheless, a check will be made during basement excavation for any signs of desiccation.

1.15. The revised BIA has confirmed that following remedial works to drainage systems in Camden, Aldred Road is now not considered to be at risk of surface water flooding.

1.16. Basic structural calculations have been provided in the revised BIA for the RC basement walls. However, there are errors in the submitted calculations with respect to the calculation of groundwater pressures. These should be corrected.

1.17. No calculations and/or information on propping arrangements have been provided for the mass concrete underpins to demonstrate that stability under lateral earth pressure loads will be maintained. This should be remedied.

1.18. Although assurances are given in the revised BIA that the category of building damage due to basement construction is anticipated to accord with Burland Category 1 (Very Slight) the likely category of damage should be demonstrated in accordance with the requirements of CPG4. This is required before the audit can be closed out.

1.19. The revised BIA has confirmed that information on construction sequencing, ground movement monitoring, action trigger levels, contingency provisions etc. will be provided in compliance with the requirements of the Party Wall Act.

1.20. An indicative programme has been submitted in the revised BIA.

1.21. Queries and requests for clarification/further information are summarised in Appendix 2.

2.0 INTRODUCTION

2.1. CampbellReith was instructed by the London Borough of Camden (LBC) on 29 September 2015 to carry out a Category 'A' Audit on the Basement Impact Assessment (BIA) submitted as part of the Planning Submission documentation for 3 Aldred Road, London NW6 1AN - Planning Reference 2015/3109/P.

2.2. The Audit was carried out in accordance with the Terms of Reference set by the LBC. The Audit reviewed the BIA for potential impacts on land stability and local surface and groundwater conditions arising from the proposed basement development in accordance with the LBC's policies and technical procedures.

2.3. Subsequent to the issue of the above initial audit, a number of clarifications and confirmations have been issued. This current audit constitutes a revision to the original CampbellReith audit, amended as necessary, to accommodate the clarifications and confirmations received.

2.4. A revised BIA has not been formally issued, but the original BIA will be construed by CampbellReith as having been amended in accordance with the contents of the above additional documentation. Any references in this audit to the revised BIA shall be taken as a reference to the original BIA updated as above.

2.5. A BIA is required for all planning applications with basements in the LBC in general accordance with policies and technical procedures contained within the following documents:

a) Guidance for Subterranean Development (GSD). Issue 01. November 2010. Ove Arup & Partners.

b) Camden Planning Guidance (CPG) 4: Basements and Lightwells.

c) Camden Development Policy (DP) 27: Basements and Lightwells.

d) Camden Development Policy (DP) 23: Water.

2.6. The BIA should demonstrate that schemes:

a) Maintain the structural stability of the building and neighbouring properties.

b) Avoid adversely affecting drainage and run off or causing other damage to the water environment; and,

c) Avoid cumulative impacts upon structural stability or the water environment in the local area.

The BIA should evaluate the impacts of the proposed basement considering the issues of land stability, hydrology and hydrogeology via the process described within the GSD and should make recommendations for detailed design.

2.7. The LBC Audit Instruction described the planning proposal as '*Single storey side and rear extension to lower ground floor; creation of habitable space within existing void below the main building and lowering of ground level; first floor rear extension; alterations to openings'.*

The Audit Instruction noted the following:

a) The basement proposals do not involve a listed building nor does the site neighbour any listed buildings.

b) The site is not in an area subject to slope stability constraints or subterranean (groundwater) flow constraints but is in an area subject to surface water flow and flooding.

c) It is unknown whether the application requires determination by the Development Control Committee (DCC).

d) The scope of the submitted BIA does not extend beyond the screening stage.

2.8. CampbellReith originally accessed the LBC Planning Portal on 21 October 2015 and examined the following reports and drawings relevant to the audit:

a) A 'Ground Investigation (GI) Report' prepared by Aviron Associates Ltd (AAL), dated 01 July 2015.

b) A separate 'Trial Pit and Photographs' Report prepared by AAL, dated 01 July 2015.

c) A 'Basement Impact Assessment Screening Summary' prepared by Price & Myers, Consulting Engineers (P&M), dated July 2015.

d) The following planning application drawings:

Site location plan.

Existing ground and basement (lower ground) plans.

Proposed ground and basement (lower ground) plans.

Existing front and rear elevations.

Proposed front and rear elevations.

Section 'A-A' existing and proposed.

2.9. This updated audit is based upon a review of the following documents issued on 11 December 2015:

a) A document entitled 'Design Team Audit Query Responses', prepared by P&M.

b) A sketch entitled 'Indicative Lightwell Construction Sequence', prepared by P&M.

c) Retaining Wall Structural Calculations (RW1) - Temporary Condition, prepared by P&M.

d) A Preliminary Construction Programme, prepared by Pawlik + Wiedmer.

e) A revised 'Ground Investigation (GI) Report' prepared by AAL, dated 09 December 2015.

2.10. No comments were received from the public on the planning application relating to land stability, hydrology or hydrogeology.

3.0 BASEMENT IMPACT ASSESSMENT AUDIT CHECK LIST

Item	Yes/No/NA	Comment
Are the BIA author(s) credentials satisfactory?	Yes	
Is data required by Cl.233 of the GSD presented?	Yes	
Does the description of the proposed development include all aspects of temporary and permanent works which might impact upon geology, hydrology and hydrogeology?	Yes	
Are suitable plans/maps included?	Yes	
Do the plans/maps show the whole of the relevant area of study and do they show it in sufficient detail?	Yes	
Slope and Ground Stability Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	No	No information has been supplied on the presence or otherwise of adjacent basements. This information should be provided.
Hydrology Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	Yes	
Hydrogeology (Groundwater Flow) Screening: Have appropriate data sources been consulted? Is justification provided for 'No' answers?	Yes	
Is a conceptual ground model presented?	Yes	

Item	Yes/No/NA	Comment
Slope and Ground Stability Scoping Provided? Is scoping consistent with screening outcome?	No	The BIA does not extend beyond the screening stage. A GMA and building damage assessment are required to be undertaken to assess the likely building damage category for the adjacent properties.
Hydrology Scoping Provided? Is scoping consistent with screening outcome?	No	The BIA does not extend beyond the screening stage. However, it is accepted that the proposed development is not at risk of causing increased downstream surface water flooding.
Hydrogeology (Groundwater Flow) Scoping Provided? Is scoping consistent with screening outcome?	No	The BIA does not extend beyond the screening stage. However, it is accepted that the proposed basement works should not create any significantly increased barrier to groundwater flow.
Is factual ground investigation data provided?	Yes	
Is monitoring data presented?	Yes	
Is the ground investigation informed by a desk study?	Yes	However, a copy of the desk study has not been made available.
Has a site walkover been undertaken?	Yes	
Is the presence/absence of adjacent or nearby basements confirmed?	No	No information has been supplied on the presence or otherwise of adjacent basements. This information should be provided.
Is a geotechnical interpretation presented?	Yes	A limited geotechnical interpretation is provided within the GI report

Item	Yes/No/NA	Comment
		together with generalised engineering recommendations.
Does the geotechnical interpretation include information on retaining wall design?	Yes	But limited only.
Are reports on other investigations required by screening and scoping presented?	NA	No such reports were identified as being required.
Are baseline conditions described, based on the 'Guidance for Subterranean Development (GSD)'?	Yes	
Do the base line conditions consider adjacent or nearby basements?	No	No information has been supplied on the presence or otherwise of adjacent basements. This information should be provided.
Is an Impact Assessment provided?	No	A GMA and building damage assessment are required to be undertaken to assess the likely building damage category for the adjacent properties.
Are estimates of ground movement and structural impact presented?	No	A GMA and building damage assessment are required to be undertaken to assess the likely building damage category for the adjacent properties.
Is the Impact Assessment appropriate to the matters identified by screen and scoping?	No	As above.
Has the need for mitigation been considered and are appropriate mitigation methods incorporated in the scheme?	Yes	

Item	Yes/No/NA	Comment
Has the need for monitoring during construction been considered?	Yes	
Have the residual (after mitigation) impacts been clearly identified?	No	Until a GMA and building damage assessment are undertaken, it is not possible to ascertain whether or not there are any residual impacts.
Has the scheme demonstrated that the structural stability of the building and neighbouring properties and infrastructure will be maintained?	No	A GMA and building damage assessment are required to be undertaken to assess the likely building damage category for the adjacent properties.
Has the scheme avoided adversely affecting drainage and run-off or causing other damage to the water environment?	Yes	
Has the scheme avoided cumulative impacts upon structural stability or the water environment in the local area?	No	A GMA and building damage assessment are required to be undertaken to assess the likely building damage category for the adjacent properties.
Does the BIA report state that damage to surrounding buildings will be no worse than Burland Category 2?	Yes	However, GMA and building damage assessment are required to be undertaken to assess the likely building damage category for the adjacent properties.
Are non-technical summaries provided?	Yes	

4.0 DISCUSSION

4.1. The revised BIA has not been taken beyond the screening stage as defined in the LBC Planning Guidance document 'Basements and Light wells (CPG4)', dated July 2015.

4.2. The qualifications of the authors, checkers and approvers of the revised BIA are in compliance with the requirements of CPG4.

4.3. 3 Aldred Road is located on the western side of Aldred Road, West Hampstead. The property forms part of an extended north-west/south-east trending terrace and is situated between N^{o} 2 Aldred Road to the south and N^{o} 4 Aldred Road to the north. The property has a rear courtyard garden and a small paved frontage. There are no significant trees along the street frontage or in the back garden.

4.4. The property comprises a two-storey, brick-built, terraced house with a lower ground floor. The lower ground floor is of variable height, providing liveable space in the rear half of the property where ground levels are lower, a restricted height cellar towards the middle and a restricted height inaccessible void space towards the front. The top of lower ground floor slab in the cellar area lies some 1.6m below ground level (bgl).

4.5. A number of trial pits were sunk within the front half of the property to determine the nature and depth of the foundations. These were found to generally comprise corbelled brickwork footings bearing directly on the soil sub-stratum but set at a number of different levels.

4.6. The proposed basement works comprise the deepening of the existing cellar area and front void by 1.315m to habitable space dimensions and the extension of this new basement beyond the front elevation of the house below the existing paved garden frontage. The extended basement will be founded 3.5m or so below ground level and will be provided with roof lights.

4.7. No information has been supplied within the BIA on the presence or otherwise of adjacent basements. This information should be provided.

4.8. Ground conditions at the site have been confirmed from a single borehole/dynamic probe hole sunk to the front of the property in June 2015 to generally comprise soft to firm (becoming very soft) reworked clay (Made Ground) to 3m bgl, overlying firm (becoming firm to stiff) London Clay to 3.95m bgl, overlying stiff (becoming very stiff) London Clay.

4.9. A standpipe was installed in the above borehole to a depth of 5m bgl. Measurements made at the time of installation and subsequently in December 2015 following issue of the original CampbellReith Audit have confirmed the likelihood of perched water within the Made Ground.

4.10. With regard to issues of slope/ground instability, the BIA states that the site and wider area do not slope more than 7^{o} (1:8) and that the proposed works will not alter this situation. The site also does not lie in the vicinity of railway cuttings and the like with a slope greater that 7^{o}. On the basis of the above, there are no slope/ground stability concerns regarding the issues raised.

4.11. The BIA confirms that the London Clay is the shallowest 'natural' stratum at the site, locally overlain by Made Ground as noted above. The London Clay is known to be susceptible to shrink/swell effects and the stratum has been shown in the GI report to be of 'high volume change potential'. However, there are no significant trees local to the property and the revised BIA has confirmed that there is no evidence of shrink/swell effects in local buildings. Nevertheless, a check will be made during basement excavation for any signs of desiccation.

4.12. The BIA confirms that the site does not lie within 100m of a watercourse or potential springline, nor does it lie within 50m of Hampstead Heath ponds. A tributary of the River Westbourne was identified as running 200m to the south-east of the site but this will have been culverted many years ago and incorporated into the local sewer system. On the basis of the above, there are no stability issues arising from the basement being located in proximity to any of the water features discussed.

4.13. The BIA confirms that the site does not lie within an aquifer (the London Clay is relatively impermeable) and hence no significant dewatering will be required during excavation for the basement, thereby avoiding any associated settlement issues. However, the revised BIA has recommended that due to the potential for perched water in the Made Ground, waterproofing should be installed to the basement and that provision should be made for local dewatering during construction. This is accepted.

4.14. The BIA confirms that the basement will be constructed within 5m of the adjacent pedestrian right of way and highway. The revised BIA has clarified the potential need for services diversions and has set out the construction sequence envisaged in the front basement area with a view to maintaining the stability and integrity of the local infrastructure.

4.15. It is stated in the BIA that the proposed basement will not significantly increase the differential depth of foundations relative to neighbouring properties. If the neighbouring properties have basements, this may be true. However, if not, there will be a relatively shallow deepening in the main basement areas but a much more significant deepening in the front garden area where excavations will be undertaken to a significant depth below existing ground level - see below concerning the need for a GMA and building damage category assessment.

4.16. The BIA confirms the site does not lie over or within the exclusion zone of any tunnels.

4.17. Regarding surface water flow and flooding, the BIA confirms that the property does not lie within the catchment area of the ponds on Hampstead Heath and thus will have no influence on the water inflow to the ponds.

4.18. The BIA confirms that the areas of impermeable hardstanding to the front and rear of the property will remain as at present and that there will be no change to the route, profile or quality of surface water flows as a result of basement construction and thus no impact on downstream properties or watercourses.

4.19. In terms of flood risk, Aldred Road is listed as having been flooded in 2002. However, the revised BIA has confirmed that following remedial works to drainage systems in Camden, Aldred Road is not now considered to be at risk of surface water flooding. The basement also does not lie below/in the vicinity of any static water features.

4.20. Concerning subterranean (groundwater) flow impacts, the BIA confirms that the site does not lie directly above an aquifer, within 100m of a watercourse, well, pond or potential springline nor below a defined water table - although as noted above, there is expected to be a perched water table within the Made Ground. It is considered that the above, together with the apparently cohesive nature of the Made Ground will mean that any groundwater flow will be limited and basement construction is thus likely to have little impact on groundwater flow locally and on nearby structures.

4.21. The BIA confirms that as part of the site drainage, no more surface water than at present will be discharged to the ground and thus there will be no impact on groundwater flows or levels.

4.22. In terms of the form of basement construction proposed, the BIA states that the load-bearing walls to the existing property are to be sequentially underpinned with mass concrete to permit basement excavation. Reinforced concrete (RC) walls tied in to a new RC basement ground-bearing slab are to be incrementally constructed in front of the underpins to provide permanent lateral support to the underpins and create a habitable space. Temporary lateral support to the underpins is to be provided as necessary and the props removed as the permanent concrete works are completed.

4.23. Although basic structural calculations have been provided for the RC basement walls in the revised BIA, no calculations and/or information on propping arrangements have been provided for the mass concrete underpins to demonstrate that stability under lateral earth pressure loads will be maintained. This should be remedied. It may be noted here that there are errors in the above submitted calculations with respect to the calculation of groundwater pressures. These should be corrected.

4.24. As noted above, the proposed basement will lead to an increase in the differential depth of foundations relative to neighbouring properties particularly at the front of the basement in the garden area.

4.25. Although assurances are given in the revised BIA that the category of building damage is anticipated to accord with Burland Category 1 (Very Slight) the likely category of damage should be demonstrated in accordance with the recommendations of CPG4. This is required before the audit can be closed out.

4.26. It is essential, that once fully formulated, the designer's requirements regarding construction sequencing, ground movement monitoring, action trigger levels etc. are fully specified in the contract documents for the works so that the contractor is made fully aware of the levels of compliance required. There should also be contingency provisions in place should on-going movements indicate the likely exceedance of predicted values. The revised BIA has confirmed that the above information will be provided in compliance with the requirements of the Party Wall Act.

4.27. An indicative programme has been submitted in the revised BIA.

5.0 CONCLUSIONS

5.1. The revised BIA has not been taken beyond the screening stage as defined in the LBC Planning Guidance document 'Basements and Lightwells' (CPG4), dated July 2015.

5.2. The qualifications of the authors, checkers and approvers of the revised BIA are in compliance with the requirements of CPG4.

5.3. The foundations to the property were found to generally comprise corbelled brickwork footings bearing directly on the soil sub-stratum but set at a number of different levels.

5.4. The proposed basement works comprise the deepening of the existing underground spaces by 1.315m. However, the extended basement will be founded 3.5m or so below the level of the front garden paving.

5.5. No information has been supplied within the BIA on the presence or otherwise of adjacent basements. This information should be provided.

5.6. Assuming that adjacent properties do not have basements, the differential depth of foundations relative to neighbouring properties will be less of a concern within the main basement areas but much more significant in the front garden area where excavations will be undertaken to a significant depth below existing ground level.

5.7. Ground conditions at the site have been confirmed to comprise Made Ground to 3m bgl, overlying London Clay. A perched water table is anticipated in the Made ground.

5.8. The revised BIA has recommended that due to the potential for perched water in the Made Ground, waterproofing should be installed to the basement and that provision should be made for local dewatering during construction. This is accepted.

5.9. The revised BIA has confirmed that although the London Clay is the shallowest 'natural' stratum at the site, the stratum occurs at depth and there is no evidence of shrink/swell effects in local buildings. Also, there are no significant trees along the street frontage or in the back garden to the property. Nevertheless, a check will be made during basement excavation for any signs of desiccation.

5.10. The revised BIA has confirmed that following remedial works to drainage systems in Camden, Aldred Road is now not considered to be at risk of surface water flooding.

5.11. Basic structural calculations have been provided in the revised BIA for the RC basement walls. However, there are errors in the submitted calculations with respect to the calculation of groundwater pressures. These should be corrected.

5.12. No calculations and/or information on propping arrangements have been provided for the mass concrete underpins to demonstrate that stability under lateral earth pressure loads will be maintained. This should be remedied.

5.13. Although assurances are given in the revised BIA that the category of building damage due to basement construction is anticipated to accord with Burland Category 1 (Very Slight) the likely category of damage should be demonstrated in accordance with the requirements of CPG4. This is required before the audit can be closed out.

5.14. The revised BIA has confirmed that information on construction sequencing, ground movement monitoring, action trigger levels, contingency provisions etc. will be provided in compliance with the requirements of the Party Wall Act.

5.15. An indicative programme has been submitted in the revised BIA.

Appendix 1: Residents' Consultation Comments

None

Appendix 2: Audit Query Tracker

CampbellReith
consulting engineers

Audit Query Tracker

Query No	Subject	Query	Status	Date closed out
1	Hydrology	The standpipe in front of the property is reported to be defective. Groundwater levels remain to be confirmed.	Closed. Additional monitoring has confirmed groundwater levels to be low. However, as noted in the revised BIA, groundwater levels may rise after a rainfall event and waterproofing should be installed to the basement and provision made during basement excavation for pumping.	19/01/16
2	Hydrology	The history of flooding in the local area is to be researched and the situation clarified.	Closed. The revised BIA has confirmed that following remedial works to drainage systems in Camden, Aldred Road is not now considered to be at risk of surface flooding.	19/01/16
3	Stability	Evidence or otherwise of history of shrink-swell subsidence in the local area to be substantiated.	Closed. It has been confirmed in the revised BIA that there is no evidence of seasonal shrink-swell subsidence in the local area. It is also confirmed that the ground at the site will be checked during basement excavation for any signs of desiccation.	19/01/16
4	Stability	Consideration to be given to the proximity of the works to Aldred Road and the temporary support requirements for the road and associated services.	Closed. Additional details have been provided in the revised BIA.	19/01/16
5	Stability	Calculations for retaining wall/underpinning design to be provided.	Open. Preliminary calculations have been provided for the permanent lightwell cantilever walls. However, there are errors in these which should be corrected – see Section 4. Calculations and/or information on propping arrangements should	

			also be provided to demonstrate the stability of the underpinning walls when subject to lateral earth pressures.	
6	Stability	Ground movement predictions to assess the likely structural impact of basement construction on adjacent properties and the likely category of damage to be undertaken.	Open. A quantitative GMA and building damage assessment to CIRIA C580 is required to be undertaken to assess the likely building damage category for the adjacent properties. This is required before the audit can be closed out.	
7	Stability	A programme of works is to be provided.	Closed. An indicative programme has been submitted in the revised BIA.	19/01/16
8	Stability	The designer's requirements regarding construction sequencing, propping, ground movement monitoring, contingency provisions etc. are to be fully specified in the contract documents for the works so that the contractor is made fully aware of the levels of compliance required.	Closed. The revised BIA has confirmed that the information listed will be provided in compliance with the requirements of the Party Wall Act.	19/01/16
9	Stability	No information has been supplied on the presence or otherwise of adjacent basements. This information should be provided.	Open.	

Appendix 3: Supplementary Supporting Documents

None

London

Friars Bridge Court
41- 45 Blackfriars Road
London, SE1 8NZ

T: +44 (0)20 7340 1700
E: london@campbellreith.com

Birmingham

Chantry House
High Street, Coleshill
Birmingham B46 3BP

T: +44 (0)1675 467 484
E: birmingham@campbellreith.com

Surrey

Raven House
29 Linkfield Lane, Redhill
Surrey RH1 1SS

T: +44 (0)1737 784 500
E: surrey@campbellreith.com

Manchester

No. 1 Marsden Street
Manchester
M2 1HW

T: +44 (0)161 819 3060
E: manchester@campbellreith.com

Bristol

Wessex House
Pixash Lane, Keynsham
Bristol BS31 1TP

T: +44 (0)117 916 1066
E: bristol@campbellreith.com

UAE

Office 705, Warsan Building
Hessa Street (East)
PO Box 28064, Dubai, UAE

T: +971 4 453 4735
E: uae@campbellreith.com