LAND TO THE WEST OF CLIFFE MOUNT, FERRAND LANE, GOMERSAL (H591)

For KCS DEVELOPMENT LTD

KIRKLEES DRAFT LOCAL ALLOCATIONS & DESIGNATIONS
JANUARY 2015

Carter Jonas

CONTENTS

1.0 INTRODUCTION

1.1 These representations are written on behalf of our client KCS Developments Ltd in support of the identification of 'Land to the west of Cliffe Mount, Ferrand Lane, Gomersal' (Site Reference H591) as a housing allocation in the Draft Local Plan Allocations & Designations Document (November 2015).

1.2 The purpose of these representations is to confirm the deliverability of the 'land to the west of Cliffe Lane, Ferrand Lane, Gomersal' in accordance with paragraph 47 of the National Planning Policy Framework (The Framework) (2012) and to demonstrate that it represents the most appropriate site for allocation out of all reasonable alternatives in and around Gomersal.

1.3 As the Council will be aware, our client has been actively involved in the promotion of the site through the Local Plan process. Detailed representations were submitted to the 'Call for Sites' consultation in May 2014 and the 'Green Belt Review' in September 2014. These representations demonstrated amongst other things that:

- The deliverability of the site in particular its suitability from a land use perspective;
- The achievability of the highway access arrangements;
- The allocation would not harm any of the five purposes of the Green Belt; and
- Ferrand Lane would provide a strong and defensible Green Belt boundary, which would have permanence beyond the plan period.

1.4 The main purpose of these representations is to express our continued support for the identification of Site H591 as a housing allocation. For thoroughness, we have addressed the issue of deliverability within this submission as it is a key consideration in terms of taking the site forward as a housing allocation. However, we have not sought to reiterate all the information already submitted to the Council within the previous representations. Instead, we have sought to focus on the particular points raised within the constraints and commentary sections of the Site Box, Site Selection Methodology Paper, and the Sustainability Appraisal as they relate to Site H591. In order to fully address these issues a number of technical reports have been commissioned, which are attached as appendices to this report. The technical reports include an Indicative Masterplan, Transport Note, Geo-Environmental Desk Study Report, Noise Assessment, Arboricultural Pre-Development Report and Drainage & Flood Risk Statement.

1.5 Our client recognises that the identification of Site H591 as a preferred option is one of the first steps in the process towards securing the allocation of the land within the adopted Local Plan. Our client wishes to work with Council Officers in bringing the site forward and is happy to provide whatever information they consider necessary to allow them to continue to support the allocation.

1.6 For thoroughness, we have attached a completed representation form, which gives full details of the Client and Carter Jonas LLP.

2.0 THE SITE

2.1 The site is approximately 3.6 hectares in size with a net developable area of 3.4 hectares. The land is currently used as low quality paddock land. The attached Geo- Environmental Desktop Study demonstrates that a proportion of the site is potentially made up of 'made ground' as a result of activities on the nearby former colliery. As a result, the site constitutes poor quality agricultural land and is of little intrinsic environmental value. However, the Geo- Environmental Desk Study establishes that the level of contamination is unlikely to be significant and would not represent a barrier to the development of the site.

2.2 The site is located on the north-western edge of Gomersal. The site directly abuts the properties bordering on to Cliffe Lane to the south, which currently marks the historic development limits of the settlement. To the north, the site borders onto Ferrand Lane. The site is surrounded by built development on three sides and as a result clearly forms part of the built up area of Gomersal and is distinct from the open countryside to the north. Consequently, in accordance with the spatial development strategy and site selection methodology, the site would constitute a "*sustainable extension to the settlement where exceptional circumstances can be demonstrated to release land from the Green Belt*" and therefore is a high priority for development / allocation.

2.3 Ferrand Lane would provide a clear and defensible Green Belt boundary, which would have permanence beyond the plan period. Equally, there is an extensive hedgerow on the northern side of Ferrand Lane, which would provide an attractive soft edge and natural boundary to the settlement.

3.0 THE PROPOSAL

3.1 An indicative masterplan has been prepared for the site, which is attached in **appendix 1**. The main points are:

- The proposed allocation would provide a policy compliant scheme for 100 dwellings;
- The scheme would provide a mixture of house types, sizes, and tenures including affordable housing;
- The proposed scheme would provide a significant area of public open space including children play provision;
- The scheme would retain the public footpath along the western site boundary and enhance it through increased natural surveillance;

- The existing Category A and B (high and moderate value) trees would be retained and integrated within the development; and
- The main landscape features within the site would be retained such as the existing hedgerows.

4.0 THE CASE IN SUPPORT OF THE ALLOCATION OF SITE H591 LAND TO THE WEST OF CLIFFE MOUNT, FERRAND LANE, GOMERSAL

4.1 We welcome the identification of our client's Site H591 'Land to the West of Cliffe Lane, Gomersal' as a preferred option for allocation in the Local Allocations and Designations Document. We consider that the site is suitable for allocation to meet the housing needs of Gomersal over the plan period because:

- It would deliver a number of benefits which would be potentially unrealised by the allocation of other sites;
- It is fully deliverable within the meaning of paragraph 47 of the Framework; and
- Its allocation would fully accord with the Council's Spatial Development Strategy and Site Selection Methodology and therefore would represent the most appropriate site for allocation out of all reasonable alternatives.

THE BENEFITS OF THE ALLOCATION

4.2 The allocation of Site H591 would deliver a number of benefits including:

- The quantum and viability of the site would allow the provision of a range of house types, sizes and tenures including a significant element of affordable housing and starter homes;
- The technical evidence demonstrates that there are no significant constraints present on the site and therefore the development would be able to meet the full range of developer contributions including education provision;
- The site is in a highly sustainable and accessible location where future residents would have access to a range of employment and retail opportunities;
- The proposed development would represent an efficient use of former colliery land within the built up confines of the settlement, which would relieve pressure on higher quality agricultural land and sensitive Green Belt sites on the edge of the settlement;
- The economic benefits to the local economy in terms of employment and increased domestic expenditure;
- The creation of a significant area of new public open space to the benefit of the local community; and
- The increased natural surveillance of the neighbouring public right of way.

DELIVERABILITY

4.3 The key test for the allocation of any site is that it should be 'deliverable' or 'developable' within the meaning of footnote 11 of paragraph 47 of the Framework. Footnote 11 states that for a site to be deliverable it must be: -

- Available now;
- Suitable location for development now; and
- Achievable with a realistic prospect that housing will be delivered in 5 years and that the development is viable.

4.4 Within these representations, we have not sought to reiterate all the information previously submitted to the Council as part of our submissions to the 'Call for Sites' Consultation (May 2014) and 'Green Belt Review' (September 2014). Instead, we are seeking to address the specific points raised in the latest consultation documents.

Availability

4.5 The main points that we wish to reiterate in terms of 'availability' are:

- The two sites owners have entered in to a promotional agreement with our client to bring the site forward for housing;
- The owner of the house that is proposed for demolition to facilitate the access to the proposed development is also the owner of a significant proportion of the site and therefore there is no ransom situation;
- The site is being promoted by KCS Developments Ltd, who have a strong track record for successfully delivering development sites to the market; and
- There is no need for third party land.

Suitability

4.6 The main considerations highlighted within the Council's Site Selection Methodology Paper, Sustainability Appraisal and Policy commentary are as follows:

1. Green Belt Considerations;
2. Compliance with the Spatial Development Strategy;
3. Impact on Trees and the adjacent Public Right of Way
4. Flooding Sequential Test;
5. Transport and Accessibility Considerations;
6. Environmental Health Considerations including Noise and Contamination; and
7. Coal Mining Activity and related Ground Stability;

4.7 These issues will be considered in turn:

1. Green Belt Considerations;

4.8 We have already submitted detailed representations in support of the allocation in terms of its impact on the five purposes of the Green Belt. However in summary:

- The site would represent a rounding off and consolidation of the north western part of the settlement;
- The site abuts existing development on three sides and is entirely contained within the built up confines of the settlement;
- The allocation of the land would not harm any of the five purposes of the Green Belt in particular it would not lead to the loss or erosion of a strategic green gap between the settlements i.e. coalescence;
- The site is visually contained and would not lead to the outward sprawl of the settlement or any prominent development; and
- The development of the site would provide an opportunity to create a strong new defensible Green Belt boundary, which would have permanence beyond the plan period.

2. Compliance with the Spatial Development Strategy;

4.9 Site H591 would represent a preferred option for allocation within the 'Spatial Strategy' because it represents a:

- Sustainable extension to the settlement where exceptional circumstances can be demonstrated to release land from the Green Belt.

4.10 The lack of deliverable brownfield sites within the urban area would constitute 'exceptional circumstances' required by national planning policy to justify the release of Site H591 from the Green Belt. It is evident from the draft proposal map that the alternative sites put forward for allocation around the village would represent significant intrusions within the Green Belt and would be largely detached from the built up area. Therefore Site H591 would be sequentially preferable for allocation in accordance with the Site Selection Methodology.

3. Impact on Trees and the adjacent Public Right of Way

4.11 The indicative masterplan demonstrates that the:

- The public right of way would be not impacted upon by the proposed development. Equally, the proposed development would increase the natural surveillance of the footpath, which would be a significant benefit in favour of the allocation.

4.12 Our client commissioned an Arboricultural Pre-Development Report, which carried out an assessment of all the trees on and adjoining the site, where public access allowed (attached in **appendix 2**). The report ranked the trees in to four separate categories according to their quality and value. The four categories are as follows:

- Category 'A' High quality and value
- Category 'B' Moderate quality and value
- Category 'C' Low quality and value
- Category 'U' Remove. Any existing value lost within 10 years.

4.13 The indicative masterplan demonstrates that the proposed development would not lead to the loss of any Category A or B trees i.e. those of high or moderate value.

4. Flooding Sequential Test;

4.14 The Drainage and Flood Risk Statement, attached in **appendix 3**, demonstrates that:

- The site is located entirely within Flood Zone 1 and therefore has a low probability of flooding.
- There are a number of viable methods for the disposal of surface water from the site with the preference being given to a soakaway/infiltration system in accordance with best practice.
- The foul water from the development would be discharged in to the Yorkshire Water foul sewer in Cliffe Lane and/or Cliffe Mount.

4.15 The Drainage and Flood Risk Statement demonstrates that there are no drainage constraints and the site is at a low risk from pluvial and fluvial flooding. Therefore in accordance with the site selection methodology, the site is a sequentially preferable location for allocation.

5. Transport and Accessibility Considerations;

4.16 The accompanying Transport Appraisal demonstrates that the site is fully deliverable from a transport standpoint and is within a highly sustainable as well as accessible location (**appendix 4**). In detail, the appraisal concludes that:

- An appropriate vehicle access can be achieved on to Cliffe Lane.
- The vehicle access can provide the required visibility splays.
- The proposed development is unlikely to result in a material impact on the operation of the local highway network.

- The site is highly accessible to public transport. There are a number of bus services within easy walking distance of the site which provide regular services to the major employment and retail centres of Leeds, Dewsbury, Huddersfield, Birstall, Morley, Mirfield and Bradford.
- The site is within reasonable walking distance to a wide range of local facilities including convenience stores, doctors' surgery, pharmacy, post office, nurseries and schools (amongst other things).
- The site is within cycling distance of a wide range of services and facilities as well as employment opportunities.

6. Environmental Health Considerations including Noise and Contamination

4.17 In response to the site policy commentary, our client has commissioned a Geo-Environmental Desk Study Report, which investigated the potential level of contamination on the site. The report attached in **appendix 5** concludes that:

- There is a 'moderate' risk of contamination due to the activities of West Lane Colliery and part of the site constitutes 'made ground'.

4.18 The report concludes that these constraints can be overcome and do not represent a constraint on the development of the site. The level of contamination is likely to be moderate and could be easily mitigated and would not undermine the delivery of residential development on the site including affordable housing.

4.19 Our client has commissioned a Noise Assessment (attached in **appendix 6**) which confirms that none of the activities surrounding the site would give rise to noise related concerns. Equally, the noise from the construction of the proposed development would be relatively short-lived and could be controlled through an appropriate working arrangement agreement i.e. restricting the hours of operation, the routing of any construction traffic etc. Therefore, the disturbance to existing residents from the construction of the development would be minimal.

7. Coal Mining Activity and related Ground Stability;

4.20 As previously stated, our client has commissioned a Geo-Environmental Desk Study Report, which also investigates whether there is any evidence of former coal working in or near the site which would represent a significant constraint on development. The report concludes that:

- The site is within a Coal Mining Reporting Area;
- The site is in the likely zone of influence from coal working, but any ground movements from these activities should have stopped; and
- The site is partially 'made ground'.

4.21 The report concludes that the former coal working would not represent a constraint on the development of the site. The issue of ground stability could be resolved by the use of standard foundation solutions. It should be noted that similar ground conditions are found throughout West Yorkshire and large parts of northern England.

Achievability

4.22 Paragraph 47 of Framework states that for a site to be achievable there should be a reasonable prospect that housing will be delivered on the site within five years and in particular, the site is viable. It is considered that the site is achievable and it has been demonstrated that there are no insurmountable constraints that would prevent the deliverability of the site.

4.23 As a leading Agency, Carter Jonas considers that there is market demand for housing development on the site. One of the principal drivers of market demand for housing is location. The site is located within an established residential area and is near the A638 and A651, which provides easy access to the M62. In addition, the site is accessible to the existing and proposed employment opportunities along the M62, Leeds, Huddersfield and Bradford.

Comparison to Alternative Sites put Forward for Allocation

4.24 As demonstrated, the site is fully deliverable and there are no technical constraints that would prevent the site coming forward in the first 5 years of the plan period. The site would clearly represent a better option for allocation than the alternative proposals put forward to the east of Gomersal. These sites would lead to significant intrusions within the Green Belt and potentially lessening the strategic gap between Gomersal and Birstall. They are also poorly related to the existing urban area.

5.0 CONCLUSION

5.1 As demonstrated, 'Land to the West of Cliffe Lane, Gomersal' (Site H591) is **DELIVERABLE** as it is 'Available, Suitable, and Achievable'. These representations have specifically sought to address the issues raised in relation to Site H591 within the Draft Local Plan Allocations and Designations Document. In summary:

1. **Visibility splays required on Cliffe Lane** – The Transport Note demonstrates that the access can achieve the required visibility splays.
2. **Protected trees adjacent to potential access point on Cliffe Lane –** The Arboricultural Pre-Development Report identifies that the proposed development would not impact on any Category A or B trees i.e. those of high or moderate value.
3. **Risk of high noise levels** – The Noise Assessment demonstrates that the surrounding land uses do not give rise to any noise related concerns in terms of their impact on the future occupiers of the site. Equally, the report concludes that the noise generated during the construction of the proposed development would be relatively short-lived and if necessary could be controlled to the satisfaction of the Local Planning Authority.
4. **Coal Mining Area -** The Geo-Environmental Desk Study Report identifies that the site is within a 'Coal Mining Reporting Area' and a 'likely zone of influence from coal working'. However the report concludes that the former coal working would not represent a constraint on the proposed development and any associated ground movement would have already stopped on the site.
5. **Contamination Assessment Phase 1 -** The Geo-Environmental Desk Study Report demonstrates that the level of contamination on the site is 'moderate' and is therefore does not a represent a constraint on the development of the site.
6. **Flood Risk Assessment -** The Drainage and Flood Risk Statement demonstrates there are no drainage constraints and the site is at a low risk from pluvial and fluvial flooding.
7. **The impact on the neighbouring public right of way** – The proposed allocation would not impact on the public right of way, which would be retained in its entirety.

Appendix 1 – Indicative Masterplan

All site dimensions shall be verified by the contractor on site prior to work commencing

Do not scale from this drawing
Only work to written dimensions

NOTES

Site layout subject to detailed level and topographical review

SCHEDULE OF ACCOMODATION

TYPE 2A - 2 BED SEMI-DETACHED- 646 SQ FT (60 SQ M) 1no. OFF STREET PARKING SPACES	18
TYPE 3A - 3 BED DETACHED - 912 SQ FT (84.7 SQ M) DETACHED GARAGE/OFF STREET PARKING	7
TYPE 3B - 3 BED SEMI-DETACHED - 785 SQ FT (73 SQ M) OFF STREET PARKING	36
TYPE 3C - 3 BED DETACHED - 904 SQ FT (84 SQ M) 2no. OFF STREET PARKING SPACES	7
TYPE 4A - 4 BED DETACHED - 1,237 SQ FT (115 SQ M) DETACHED GARAGE	13
TYPE 4B - 4 BED DETACHED - 1,170 SQ FT (108.7 SQ M) INTEGRAL GARAGE	14
TYPE 4C - 4 BED DETACHED - 1,157 SQ FT (107.5 SQ M) INTEGRAL GARAGE	5
TOTAL NOTE: G.I.A. SHOWN EXCLUDING GARAGE SPACE	100

Rev	Designation	Details of Revision	Date	By/Chk/Sign
A		MINOR AMENDMENTS FOLLOWING COMMENTS.	16.11.15	(DPE)

DRAFT

ellis healey architecture

SKETCH

PROJECT:	PROPOSED DEVELOPMENT LAND AT FERRAND LANE GOMERSAL
TITLE:	PROPOSED SITE PLAN
DRAWING NO:	1332 SK 04 A
BY/CHECKED:	DPE
DATE:	NOV 2015
SCALE @A1:	1:1000

Round Foundry Media Centre, Foundry Street, Leeds, LS11 5QP
Tel: 0113 3944355 E-mail: info@ellishealey.com

Appendix 2 – Arboricultural Pre-Development Report

elliottconsultancyltd.
arboricultural consultants

Location:
Ferrand Lane,
Gommersal

Report Type:
Arboricultural Pre-development Report

Ref:
ARB/CP/1224

Date:
November 2015

Wrens Nest, Underhill, Glaisdale, North Yorkshire, YO21 2PF
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Company Registration No: 5515572 VAT No: 889226571

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Appendices

1 Introduction

1.1 Acting upon the request of the client a survey of trees to the south of Ferrand Lane, Gommersal was carried out on the 10th November 2015. The tree survey and report production were undertaken by Charles Prowse of Elliott Consultancy Ltd.

1.2 Scope of the document:

- This document provides details of the individual trees and groups of trees that were surveyed and is intended to assist with site layout decisions. A key to abbreviations used precedes the tree data (Appendix 1).
- All trees within the site were assessed and categorised with regard to their quality and a retention value was assigned using criteria outlined in British Standard 5837:2012 – 'Trees in Relation to Design, Demolition & Construction' (BS5837:2012). Section 3 explains the different categories and notes the trees and groups assigned; Appendix 3 provides information regarding the categorisation method.
- A Tree Constraints Plan is included as Appendix 2 which shows the locations of trees, groups and hedgerows with identifying numbers, BS5837 category, crown spread, and root protection area extents.

1.3 This document represents the first in a series of reports outlined within BS5837:2012 that are intended to provide the necessary advice to ensure appropriate tree retention and protection. An Arboricultural Impact Assessment, which evaluates the proposed development in context to the existing trees, should be undertaken once potential layouts have been prepared for the detailed planning submission. Following detailed layout finalisation and approval an Arboricultural Method Statement and Tree Protection Plan should be produced, and approved by the Local Planning Authority.

1.4 The locations of the trees upon the Tree Constraints Plan are as per the topographical plan (drawing number EH1000-001 to 002 DRAFT) provided.

2 Site Information

2.1 The area surveyed is located to the south of Ferrand Lane, Gommersal. Figure 1 shows the extent of the area.

Figure 1: Area Surveyed Highlighted

2.2 The area is comprised of a number of agricultural fields currently used for grazing. Some outbuildings used for housing poultry are located to the rear number 271 Cliffe Lane which was also included within the survey area.

2.3 The trees are predominantly located within field boundary hedgerows that surround and crisscross the area. A small number of trees located within adjacent properties were recorded where they could have an influence within the site. Their details are annotated upon the Tree Constraints Plan, Appendix 2.

2.4 Residential properties abut the survey area to the east, south and the southern half of the western boundary. A commercial property is located to the northwest. Agricultural land and a cemetery are located beyond Ferrand Lane to the north.

2.5 On the day the site was surveyed the sky was predominantly overcast which presented reasonable levels of light. Any visibility issues encountered are noted within Appendix 1).

3 Tree Category Evaluation

3.1 The criteria used for evaluating how suitable each tree is for retention within a development is that suggested within 5837:2012; a copy of the categorisation sheet can be found within Appendix 4.

3.2 BS5837:2012 notes that all trees apart from those with stem diameters <150mm or classified as Category U should be considered for retention and viewed as a potential site constraint. When inspected, each tree and or group feature is assigned one of four categories that signify how suitable that tree/group would be for retention within any development proposals, and therefore the degree to which it should constrain the site. The four categories are as follows:

3.2.1 **Category A** (coloured green) trees are those of high quality and value, and of a condition whereby they could make a substantial contribution to the site. The retention of Category A trees should be considered during the design phase and afforded adequate physical protection during the construction phase in accordance with BS 5837:2012 where retained. This means keeping proposed features and alterations to ground levels outside of root protection areas and crown spreads so as to ensure that the tree remains in an adequate condition post-development. Root protection areas and crown spreads are displayed upon the Tree Constraints Plan, Appendix 2. Two individual trees were classified as Category A; their numbers being Trees 20 and 34.

3.2.2 **Category B** (coloured blue) trees are those of moderate quality and value, and of a condition that they make a substantial contribution to the site. The retention of Category B trees should be considered during the design phase and afforded adequate physical protection during the construction phase in accordance with BS 5837:2012 where retained. Fifteen individual trees, and two hedgerows were classified as Category B; their numbers being Trees 1, 3, 4, 6, 9, 10, 12, 14, 15, 18, 21-25, 30, 32, 33 and Hedgerows 1 and 2.

3.2.3 **Category C** (coloured grey) trees are considered to be of low quality and value, but of an adequate condition to remain in the short-term. Trees with a stem diameter of less than 150mm (measured at 1.5m above ground level) are classified as Category C; these trees should also be retained where

possible but where they form a significant constraint to development their removal should be permitted. Where they are to be retained they should be afforded adequate consideration during the design phase and physical protection during the construction phase in accordance with BS 5837:2012. Twelve individual trees, eight groups of trees and nine hedgerows were classified as Category C; their numbers being Trees 2, 7, 8, 11, 13, 16, 17, 26-29, 31, Groups 1-8, and Hedges 3-11.

3.2.4 **Category U** (coloured red) trees are of such a condition that any existing value would be lost within 10 years. As a result it is recommended that Category U trees are not considered a constraint for development and are removed prior to construction commencing. Two of the trees were classified as Category U. Tree 5 is a goat willow with poor form which is in contact with an out-building and Tree 19 is an oak which has been left unbalanced and with a stem crack following the loss of a co-dominant stem.

3.2.5 In addition to the four main categories explained above, each tree/group is assigned a sub-category which signifies its overriding value as determined by the surveyor, which is noted by adding a suffix of 1, 2 or 3 alongside the category letter. 1 signifies that the trees/groups main value is arboricultural e.g. it may be a particularly good example or may be rare. 2 signifies that the overriding factor was due to the landscape value that the tree/group provides e.g. it may be part of a group feature such as a screen. 3 indicates that a cultural factor was the overriding value e.g. it may have historical or commemorative importance.

3.3 Overall the majority of the trees within the site are of reasonable to good physiological and structural condition with few arboricultural issues noted. Specific details for trees, groups and hedgerows can be found within Appendix 1.

Summary of Categories Awarded			
Category	Tree Numbers	Group Numbers	Hedgerow Numbers
A	20, 34		
B	1, 3, 4, 6, 9, 10, 12, 14, 15, 18, 21-25, 30, 32, 33		1 & 2
C	2, 7, 8, 11, 13, 16, 17, 26-29, 31	1-8	3-11
U	5, 19		

4 Tree Retention and Protection Considerations

4.1 The information contained within this report and Tree Constraints Plan (Appendix 2) should be used to guide the design with the aim of producing a layout that integrates existing trees of suitable quality where at all possible. Crown spreads and root protection areas should be respected with adequate space afforded for future development as the trees mature. An **Arboricultural Impact Assessment** should be undertaken on the final development proposals and submitted to the Local Planning Department as part of the detailed planning application.

4.2 Any tree retained within the design will require protection in accordance with *BS 5837 'Trees in relation to design, demolition and construction'* 2012 regardless of its initial retention category. This protection will usually require trees enclosed by a barrier in areas equal to the Root Protection Areas (As detailed within Appendix 2); this should be undertaken prior to any work beginning, including demolition and site preparation works. The specification for the fencing and for any other protection measures required must be provided within the **Arboricultural Method Statement** and approved by the Local Planning Authority.

4.3 Root protection areas should be considered sacrosanct from any disturbance throughout the entire development process - with no ground disturbance, material storage, or physical encroachment allowed. Where possible trees should be protected with continuous barriers protecting trees as groups rather than individual specimens – this is of particular merit around the periphery of the site to protect boundary trees on and off-site.

4.4 Areas that have been identified for post-development tree planting should also be protected to ensure that the soil does not become compacted or contaminated.

4.5 Trees are capable of causing damage to structures either directly, such as physical contact damage or indirectly given the required conditions, such as subsidence. Chapter 4.2 'Building near Trees' of the NHBC Standards should be consulted by those responsible regarding building foundation depths required according to the species of adjacent trees, and for suitable species to be planted given their intended positions to new and existing structures.

4.6 No new utility runs must be located within any of the retained trees root protection areas. Any works to existing utilities will be undertaken with regard for the retained

tree cover and will be in accordance with NJUG (National Joint Utility Groups) guidelines.

Appendix 1 Tree Details

Key for Tree & Group Data tables:

No.	Tree Number
Species	Tree Name (common)
Age	Y = Young; SM = Semi-mature; EM = Early-mature M = Mature; OM = Over-mature; V = Veteran; D = Dead
DBH	Diameter at Breast Height (measured at 1.5m above ground level to the nearest cm)
Stems	The number of stems the tree has
Height	Overall tree height measured in metres
Crown Spread	Measured along the four cardinal points in metres
CH	Canopy Height (height of crown above ground)
1st Branch	The height and aspect of the 1st significant limb e.g. 2 NE = 1st limb at 2m growing in a north-easterly direction.
EstD	Indication of whether any of the trees dimensions were estimated: Y=Yes, N=No.
General Observations	Appraisal of trees general condition
EstCont	Estimated remaining contribution (years)
BS Cat	British Standard 5837:2012 retention category
Recommendation	Remedial works that may be required should the tree be retained (Note: these recommendations do not relate to proposed development requirements – such recommendations should be covered within the Arboricultural Method Statement)

Tree Survey Data - Ferrand Lane, Gommersal

No.	Species	Age	DBH	Stems	Height	Crown Spread				CH	1st Branch		EstD	General Observations	EstCont	BS Cat	Recommendation
						N	S	E	W								
1	Sycamore	M	76	1	14	5	7	8	8	2	3	SW	N	Co-dominant crown. Branch failure stub(s).	40+	B2	No work required
2	Ash	Y	17	2-5	6	0.5	4	1	3	1.5	2	S	N	Co-dominant stems at base. Slightly suppressed form.	40+	C2	No work required
3	Sycamore	M	74	1	14	7	8	7	6	2.5	4	S	N	Open cavity from wound 0.5m to 1.8m - extent is limited at present. Branch failure stub(s). Deadwood. Co-dominant crown.	20+	B2	No work required
4	Sycamore	M	64	1	12	5	6	3	5	2.5	3	N	N	Epicormic growth at base. Damage to surface roots. Branch failure stub(s). Co-dominant crown.	40+	B2	No work required
5	Willow spp	M	36	1	7.5	5	4	3	4	2	1	N	N	Tree in contact with out-building	10+	U	Fell.
6	Ash	EM	40	1	10	4	0	5	4	2.5	2	E	N	North of hedge. Stem leaning 15 degrees. Pruning stub(s) within crown.	40+	B1	No work required
7	Ash	EM	51	2-5	10	4	6	5	5	1.5	1	SE	N	Multi-stemmed. Co-dominant stems at base. Pruning stub(s) within crown.	40+	C1	No work required
8	Ash	EM	40	2-5	9.5	4	6	5	3	2	2	S	N	Co-dominant stems at base. Stem wounds.	40+	C1	No work required

No.	Species	Age	DBH	Stems	Height	Crown Spread				CH	1st Branch	EstD	General Observations	EstCont	BS Cat	Recommendation
						N	S	E	W							
9	Oak spp	EM	63	1	9	5	5	5	4	2	2 S	N	Stem wounds. Basal cavity - extent unknown. Stem sweep. Branch failure stub(s). Deadwood.	40+	B1	Investigate extent of basal decay to ascertain structural integrity.
10	Ash	EM	46	2-5	9	6	5	6	4	3.5	3 SW	N	Co-dominant stems at base. Branch failure stub(s). Minor deadwood.	40+	B1	No work required
11	Ash	EM	52	2-5	14	4	6	5	4	1.5	2 SE	N	Multi-stemmed. Stem wounds.	20+	C1	No work required
12	Ash	M	46	1	14	4	9	7	4	2	4 NE	N	Slightly suppressed form. Branch failure stub(s).	40+	B2	No work required
13	Ash spp	M	84	1	19	6	12	5	7	2	4 S	N	Pholiota squarrosa fruiting bodies at bse. Branch failure stub(s).	10+	C1	Undertake decay detection to ascertain structural integrity.
14	Sycamore	SM	42	1	12	4	7	4	4	2	3 SE	N	Located at the bottom of the bank beyond the boundary fence.	40+	B2	No work required
15	Sycamore	EM	62	2-5	8	4	5	5	6	2	2 W	N	Multi-stemmed at base.	40+	B2	No work required
16	Hawthorn	M	45	5+	7	4	5	5	5	1	0 S	N	Multi-stemmed.	40+	C1	No work required
17	Ash	SM	38	1	12	4	4	4	3	1.5	2 S	N	Stem wound with superficial decay. Severe stem sweep. Poor form.	20+	C1	No work required
18	Ash	SM	37	1	13	5	3	4	3	1.5	2 SE	N	Co-dominant crown.	40+	B2	No work required

No.	Species	Age	DBH	Stems	Height	Crown Spread				CH	1st Branch	EstD	General Observations	EstCont	BS Cat	Recommendation
						N	S	E	W							
19	Oak spp	M	73	1	11	5	9	6	4	3	2 NE	N	Failure of Co-dominant stem at 1.5m has resulted in the the remaining elements being unbalanced. Cracks within upper stem wound suggest failure of remaining parts is likely	<10	U	Fell or reduce weight within canopy.
20	Sycamore	M	64	1	16	7	6	8	6	2.5	3 E	N	Pruning wound(s) on stem. Dominant canopy over neighbouring tree.	40+	A2	No work required
21	Sycamore	EM	41	1	13	4	4	6	5	3.5	3 E	N	Part of linear group with contiguous crowns. Co-dominant stems at 2.5m.	40+	B2	No work required
22	Sycamore	EM	40	1	13	2	3	6	5	3	2 E	N	Part of linear group with contiguous crowns. Co-dominant stems at 2.5m.	40+	B2	No work required
23	Sycamore	EM	38	1	11	3	4	6	5	3	3 E	N	Part of linear group with contiguous crowns.	40+	B2	No work required
24	Sycamore	EM	40	1	9	4	4	4	4	1.5	1 E	N	Stem leaning 10 degrees. Stem wound.	40+	B1	No work required
25	Oak spp	M	94	1	13	6	7	6	6	2	1 N	N	Multi-stemmed at 1.3m. Minor Stem decay. Branch failure stub(s).	40+	B1	No work required
26	Sycamore	SM	22	1	8	0.5	3	1	3	4	3 SW	N	Suppressed form. Stem leaning 20 degrees.	40+	C2	No work required
27	Oak spp	EM	36	2-5	7	5	4	5	4	2	1 N	N	Co-dominant stems at base - previously trifurcated. Stem wounds wd. Pruning stub(s) upon stem.	20+	C1	No work required

No.	Species	Age	DBH	Stems	Height	Crown Spread				CH	1st Branch		EstD	General Observations	EstCont	BS Cat	Recommendation
						N	S	E	W								
28	Ash	EM	44	1	14	8	2	7	4	2	2	N	N	Suppressed form. Co-dominant stems at 1.5m.	20+	C1	No work required
29	Hawthorn	M	30	2-5	7	2	0.5	1	2	1.5	2	E	N	Co-dominant stems at 0.8m Stem wound with decay. Suppressed form.	20+	C2	No work required
30	Sycamore	M	56	1	13	5	5	7	6	2.5	2	E	N	Base obscured by debris. Soil level has possibly increased to the east of the stem in the past. Stem wound from 1.2m to 4.4m. Minor deadwood. Branch failure stub(s).	40+	B2	No work required
31	Elm spp	Y	17	1	5	4	2	3	3	1	0	N	N	Multi-stemmed.	40+	C1	No work required
32	Ash	M	54	1	16	6	8	4	8	2.5	4	SW	N	Fused limb at base btween this and adjcant tree - possibly remnants of previously laid hedgerow ash. Co-dominant crown. Branch failure stub(s).	40+	B2	No work required
33	Ash	M	59	1	18	8	8	8	4	2	4	N	N	Fused limb at base btween this and adjcant tree - possibly remnants of previously laid hedgerow ash. Co-dominant crown. Branch failure stub(s).	40+	B2	No work required
34	Oak spp	M	73	1	12	7	7	7	6	2.5	2	N	N	Damage to surface roots. Tree house within crown. Branch failure stub(s).	40+	A1	No work required

Group Data - Ferrand Lane, Gommersal

Group Number	Dominant Species	Lesser Species	DBH	Average Height	Age	Average Spread	Condition/Comments	Recommendations	EstCont	BS Cat
1	Hazel		45	6	M	4	Linear group of previously coppiced hazel.	No work required	40+	C2
2	Hazel Hawthorn Elder	Sycamore	25	3	Y-M	2	Linear group along boundary. Remnants of old hedgerow hawthorn.	No work required	20+	C2
3	Sycamore Hawthorn Elm spp		20	4	Y-M	2	Stem wounds. Fire damage from nearby bonfire.	No work required	20+	C2
4	Hawthorn Ash Elder		15	4	Y-M	2	Small group along line of old field boundary.	No work required	20+	C2

Group Number	Dominant Species	Lesser Species	DBH	Average Height	Age	Average Spread	Condition/Comments	Recommendations	EstCont	BS Cat
5	Blackthorn Hawthorn		10	4	EM	1	Group of blackthorn with occassional hawthorn	No work required	40+	C2
6	Holly		15	4	EM	3	Small group of holly.	No work required	40+	C2
7	Hawthorn		35	5	M	3	Remnants of outgrouwn hedgerow.	No work required	40+	C2
8	Holly Hawthorn		20	5	M	3	Linear group - hawthorn are remnants of an old hedgerow.	No work required	40+	C2

Hedgerow Data - Ferrand Lane, Gommersal

Hedge Number	Dominant Species	Lesser Species	Age	Average Height	Average Depth	Historically Managed Height	Historically Managed Depth	Condition/Comments	Recommendations	EstCont	BS Cat
1	Hawthorn Elder Holly		M	4	2	1	1	Unmanaged hedgerow broken by gateway. Becoming gappy at base.	No work required	40+	B2
2	Hawthorn	Ash Elm spp Holly	M	3	1	2	As current depth	Sporadically managed hedgerow upon earthen bank. Broken in sections and bolstered with timber fence.	No work required	40+	B2
3	Hawthorn	Holly	M	3	2	1	1	Remnants of an outgrown hedgerow.	No work required	40+	C2
4	Hawthorn	Holly Ash	M	3	3	1	1	Sporadically managed hedgerow. Broken in sections and bolstered with timber fence. Gaps at western end.	No work required	40+	C2

Hedge Number	Dominant Species	Lesser Species	Age	Average Height	Average Depth	Historically Managed Height	Historically Managed Depth	Condition/Comments	Recommendations	EstCont	BS Cat
5	Hawthorn	Elder	M	4	4	As current height	2	Remnants of an unmanaged broken hedgerow with large gaps between trees.	No work required	20+	C2
6	Hawthorn		M	4	2	2	1	Remnants of an unmanaged broken hedgerow. Gaps between trees.	No work required	20+	C2
7	Western Red Cedar		SM	5	2	As current height	As current depth	Unmanaged hedgerow adjacent to field boundary.	No work required	40+	C2
8	Western Red Cedar		SM	5	2	As current height	As current depth	Unmanaged hedgerow adjacent to field boundary.	No work required	40+	C2

Hedge Number	Dominant Species	Lesser Species	Age	Average Height	Average Depth	Historically Managed Height	Historically Managed Depth	Condition/Comments	Recommendations	EstCont	BS Cat
9	Hawthorn		M	3	3	2	1	Unmanaged, broken hedgerow.	No work required	40+	C2
10	Hawthorn Elder	Ash Sycamore Holly	Y-M	3	3	1	1	Unmanaged outgrown boundary hedgerow. Broken in places.	No work required	20+	C2
11	Hawthorn	Holly Ash Elder Oak spp	M	4	3	1	1	Unmanaged outgrown boundary hedgerow. Broken in places. Bamble covered. Some young self-seeded trees within.	No work required	40+	C2

0 5 10 15 20 25 30 35 40 45 50 [m]

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Tree Position Showing Crown Extents and BS5837 Category A

Tree Position Showing Crown Extents and BS5837 Category B

Tree Position Showing Crown Extents and BS5837 Category C

Tree Position Showing Crown Extents and BS5837 Category U

Root Protection Area - to remain free from disturbance (merged where over-lapping)

Position of Tree Upon Adjacent Property Showing Extent of Crown Overhanging the Site & Root Protection Area Estimate

Group Position Showing Crown & Root Protection Area Extents, and BS5837 Category C

Hedgerow Position Showing Crown & Root Protection Area Extents, and BS5837 Category B

Hedgerow Position Showing Crown & Root Protection Area Extents, and BS5837 Category C

Photo Number, Position and Aspect

1/G1 Tree/Group

A1/B1/C1/U BS5837 Retention Category

APPENDIX 2

Drawing Title:	Tree Constraits Plan
Project:	Ferrand Lane, Gommersal
Drawing Number:	ARB/CP/1224/TCP
Date:	November 2015
Scale:	1:500 @ A1
Client:	

Appendix 3 BS 5837 Tree Quality Assessment Chart

Table 1 Cascade chart for tree quality assessment

Category and definition	Criteria (including subcategories where appropriate)			Identification on plan
Trees unsuitable for retention (see Note)				
Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years	• Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) • Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline • Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality *NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see **4.5.7**.*			See Table 2
	1 Mainly arboricultural qualities	**2 Mainly landscape qualities**	**3 Mainly cultural values, including conservation**	
Trees to be considered for retention				
Category A **Trees of high quality** with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	See Table 2
Category B **Trees of moderate quality** with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation or other cultural value	See Table 2
Category C **Trees of low quality** with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value	See Table 2

Table excerpt from BS5837:2012

Appendix 4 Arboricultural Glossary

Abiotic Factors – Nonliving factors of the environment, including temperature & wind.

Age-class – A general classification of the tree into either - young, semi-mature, early-mature, mature, over-mature, or senescent.

Amenity Value – A general classification based on the trees contribution to local amenity. Factors such as location and visibility from public spaces, size, maturity and species are taken into account.

Apical Bud/Shoot – The apical bud, also known as the leading shoot, is responsible for shoot extension and is dominant.

Apical Dominance – A singular, leading shoot remains dominant.

Biotic factors - Living factors. For example, animals and pathogens.

Bottle Butt – Term used to describe shape of stem base, usually associated with an internal defect – refer to 'Reaction Wood' below.

Branch union/junction - The point at which a branch joins a larger stem. Can be a point of weakness, especially in certain species.

Cambium - A lateral meristem (see below) in vascular plants located just beneath the bark responsible for secondary growth, e.g. production of annual growth rings.

Canker – A clearly defined area of dead and sunken or malformed bark, caused by bacteria or fungi. Can have a bearing on structural integrity of infected limb(s) depending on size and location.

Chlorosis/Chlorotic – Abnormal yellow or yellow-green coloration of usually green leaves. Essentially a reduction of chlorophyll levels often as a result disease or nutrient deficiency.

Co-dominant stems - A growth characteristic, where two or more stems of similar size grow from the same point. Can create an inherent weakness.

Coppice - The method of managing trees by cutting the stems at between 1.0 inch and 1.0 foot from the ground level on a regular cycle, the cut stumps of the trees or shrubs are allowed to re-grow many new stems.

Crown spread - Gives distances between extreme limits of the crown and the stem, usually along the four compass points. Helps to show crown symmetry.

Crown Reduction – The removal of branch ends to reduce the extreme limits of a trees branch spread and height.

Crown Thin – The removal of selected branches within the crown to thin the internal branch structure.

D.B.H. - 'Diameter at Breast Height', an industry standard to gauge tree stem size and development. Within arboriculture, breast height is taken to be 1.5m above ground level.

Dieback - The reduction in crown vigour and extension growth progressing to death of distal parts; often associated with decline.

Epicormic/adventitious growth - New growth from dormant buds that can often form tenuous attachments. Although some species readily form such shoots, it can be an indication of stress.

Hanger – Term used to describe a branch that has become detached and is being supported by other branches. Can be a hazard to persons and property below.

Hazard Beam – After the loss of a distal part, a limb concentrates growth upwards creating adverse end weights that can render the limb susceptible to failure.

Hyphae – Fine branching tubes that make up the body (or mycelium) of a multi-cellular fungus.

Included bark – Growth characteristic usually caused when two or more stems/branches growing in close proximity 'fuse' together entrapping the bark from when the parts were separate in the middle, creating a potential structural weakness. Some trees are able to strengthen such 'weakened' unions with adaptive growth.

Meristem - The undifferentiated plant tissue from which new cells are formed, such as that at the tip of a stem or root.

Meristematic Disorder – A growth disorder caused by a disruption of the meristem (see above) from any of a number of biotic factors (see above). Manifests as growths such as 'Witches Brooms' & 'Galls'.

Mycelium – Mass of hyphae that constitutes the vegetative part of a fungus.

Necrosis/Necrotic – Death of tissues usually characterised by a blackening in colour.

Occlusion/Occluded – Normally used to describe the overgrowth of a wound. Also, immoveable foreign objects in contact with a tree part can become encased or 'occluded' by the tree as it grows incrementally.

Pathogen - An agent that causes disease, especially a living micro-organism such as a bacterium or fungus.

Pollard – The removal and subsequent regular re-removal of the crown of a tree above animal browsing height. Can be an effective method of controlling the size of trees in urban areas. This is ideally begun in the trees early stages and maintained throughout its life.

PSULE – Potential Safe Useful Life Expectancy. A general classification as to the trees life expectancy.

Reaction wood - Essentially additional wood laid down by the tree to compensate for structural defects such as a cavities.

Ring barking/Girdling – the removal of bark around the entire circumference of a stem or branch, causing the death of all distal parts.

Rhizomorphs – Dense bundles of mycelium, blackened by melanin for protection, that aid in the spread of the fungus.

Root Protection Area – An area, usually represented as a circle, around each tree which should remain free from disturbance during a development in order to protect the roots of a tree.

Saprophyte – An organism which exists on dead plant material.

Scaffold branches - The main structural branches within the crown.

Veteran tree – Tree that, by recognised criteria, shows features of biological, cultural or aesthetic value that are characteristic of, but not exclusive to, individuals surviving beyond the typical age range for the species concerned.

Vigour - A general classification, as to the present and future potential growth and development of a tree. A comment regarding the health status of the tree specific to its species.

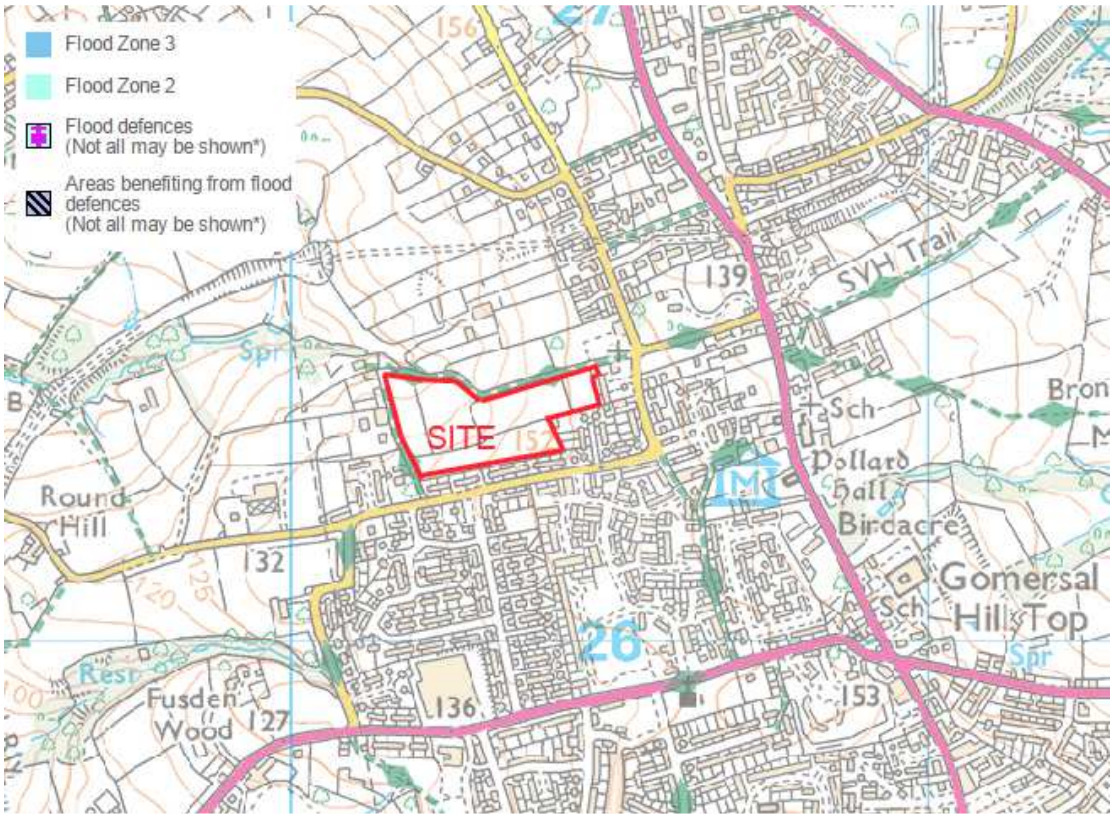
Appendix 3 – Drainage and Flood Risk Statement

DRAINAGE & FLOOD RISK STATEMENT

Proposed Residential Development – Cliffe Lane, Gomersal.

1.0 FLOOD RISK ASSESSMENT

Publicly available information on flooding obtained from the Environment Agency (EA) website database is provided below:



The site is indicated to fall within Flood Zone 1 which comprises land assessed as having less than a 1:1000 annual probability of river or sea flooding.

NPPF Technical Guidance states all uses of land are appropriate in Flood Zone 1.

2.0 EXISTING SEWER NETWORK

Public sewer records obtained from Yorkshire Water indicate the following public sewers in close proximity to the site;

- A 225mm diameter foul public sewer is recorded in Cliffe Lane and a 150mm diameter foul public sewer is recorded in Cliffe Mount, both to the south of the site.
- A 150mm diameter surface water public sewer is recorded in Fern View to the south of the site.

A copy of the public sewer record plan is attached.

3.0 SURFACE WATER DRAINAGE

The disposal of surface water shall be in accordance with the Requirement H3 of Building Regulations 2000. This establishes a preferred hierarchy for surface water disposal. Consideration should firstly be given to discharge to soakaway/infiltration system, watercourse and public sewer in that priority order.

Soakaway tests shall be undertaken on site to assess the suitability for the discharge of surface water by infiltration techniques.

If infiltration techniques are not deemed suitable the second consideration should be discharge to watercourse.

Reviewing the ordnance survey plans for the area they indicate the site has a steep incline to the northwest towards an area of wooded land. A watercourse is shown issuing from the west of the wooded area this would appear to be the obvious location for the discharge of surface water from the site.

An off-site surface water sewer will be required to provide a sewer connection to this location. The sewer could be provided by the developer and considered for adoption by Yorkshire Water under Section 104 of the Water Industry Act 1991, subject to agreement with the adjacent land owners. Alternatively, the Developer may requisition the off-site sewer through Yorkshire Water under Section 98 of the Water Industry Act 1991.

A discharge of surface water to this watercourse will be restricted to the existing equivalent greenfield rate. Therefore, on-site surface water storage will be required to attenuate surface water flows in excess of the greenfield rate.

As a last resort and subject to confirmation that soakways and a discharge to watercourse are not viable Yorkshire Water may allow the discharge of surface water to the public sewer network, however it is likely that this would be at a restricted rate with on-site attenuation provided.

The proposed on site drainage network shall be designed at detailed design stage in accordance with the requirements of Sewers for Adoption and shall demonstrate that:

No surcharge of pipes occurs in the 1-in-2 year rainfall event.

No surface flooding occurs in the 1-in-30 year rainfall event.

No flooding to buildings and adjacent properties occurs in the 1-in-100 year rainfall event (including an allowance of 30% for the effects of future climate change), as defined in NPPF Technical Guidance.

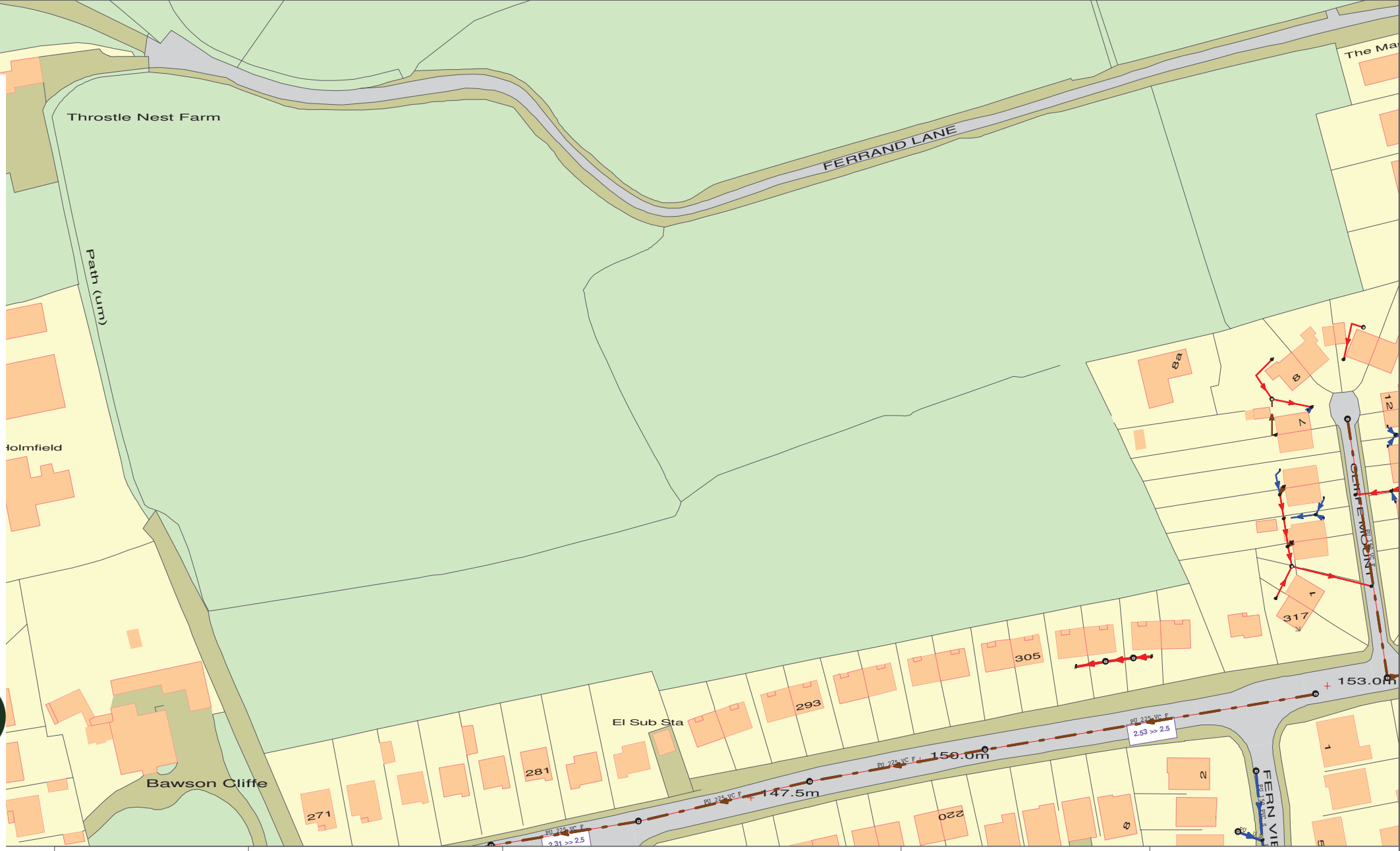
4.0 FOUL WATER

It is proposed to discharge foul water from the site to the Yorkshire Water foul sewers in Cliffe Lane or Cliffe Mount to the south of the site.

An off-site foul water sewer will be required to provide a sewer connection to this location. The sewer could be provided by the developer and considered for adoption by Yorkshire Water under Section 104 of the Water Industry Act 1991, subject to agreement with the adjacent land owners. Alternatively, the Developer may requisition the off-site sewer through Yorkshire Water under Section 98 of the Water Industry Act 1991.

Andrew Fairburn
For and on behalf of JPG (Leeds) Limited
November 2015

AMF/DFS/4730.v1



safe-move
A part of YorkshireWater

420084 : 426211	Map Name : SE2026SW	Title	Partial Key Foul Sewer = F Combined Sewer = C Surface Water Sewer = SW Trade Sewer = TD Partially Separate = PS
Yorkshire Water, PO Box 500, Halifax Road, Bradford BD6 2LZ Contact Name : Search Advisor L MULLOCK Contact Tel : 75 4506		Notes	This plan is furnished as a general guide only and no warranty as to its correctness is given or implied. This plan must not be relied upon in the event of excavations or other works made in the vicinity of public sewers. No house or property connections are shown.
			Date Req : 26/10/2015, 11:22:25 Source : Sewer Network Enquiry
			Date Gen : 26/10/2015, 11:22:27

UPN: Undefined Originator: L MULLOCK, Safe-Move, 75 4506

Appendix 4 – Transport Appraisal

BRYAN G HALL

CONSULTING CIVIL & TRANSPORTATION PLANNING ENGINEERS

Our ref: 15-398/RD

please reply to Leeds office

12 January 2016

Mr Stephen Courcier
Carter Jonas LLP
Regent House
13 - 15 Albert Street
Harrogate
HG1 1JX

Dear Stephen,

LAND AT CLIFFE LANE, GOMERSAL

This Transport Appraisal letter has been prepared to support the inclusion of the site at Cliffe Lane, Gomersal, for residential use under allocation H591 of the emerging Kirklees Local Plan. This letter demonstrates that residential development on the site would be accessible and can be delivered without materially impacting on the operation of the local highway network.

Draft Local Plan – Strategy and Policies

The draft Local Plan for Kirklees includes a Strategy and Policies document (November 2015), section 9 of which sets out the draft transport related objectives for development in Kirklees. This includes a number of draft policies which aim to ensure new developments can be accessed using sustainable travel modes.

For example, Policy DLP 20 "Sustainable Travel" states that:

"New development will be located in accordance with the spatial development strategy to ensure the need to travel is reduced and that essential travel needs can be met by forms of sustainable transport other than the private car. The council will support development proposals that can be served by alternative modes of transport such as public transport, cycling and walking and in the case of new residential development is located close to local facilities.

The council will support demand management measures which discourage single occupancy car travel within new development and encourage the use of low emission vehicles to improve areas with low levels of air quality. Proposals should include measures to encourage the use of sustainable travel options, including public transport, the promotion of personal journey planning, walking, cycling, car sharing, electronic communication and home working.

Continued

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Continuation 1
Mr S Courcier
15-398/RD

12 January 2016

Travel plans will be required for all major planning applications in accordance with current guidance and should set targets and monitoring arrangements to ensure sustainable travel patterns are maintained. Travel plans should include agreed and defined outcomes related to a package of specified measures to be implemented."

This Transport Appraisal letter demonstrates that the site at Cliffe Lane, Gomersal, is accessible using alternative and more sustainable modes of transport than simply relying on single occupancy car journeys, and is therefore in line with the draft policies set out in the Transport section of the draft Local Plan Strategy and Policies document.

The Site and the Development Proposal
The site comprises 3.89ha of rough pasture, which is located to the north western extents of the settlement of Gomersal, therefore the site would represent an extension to Gomersal. The land is bounded by Ferrand Lane to the north, residential development to the east, residential development and Cliffe Lane to the south and residential development and agricultural land to the west.

The site is identified in the Kirklees draft Local Plan Allocations and Designations document (November 2015) as a proposed housing allocation for up to 115 dwellings (Site Reference H591).

Highway Access
It is envisaged that the development would be accessed by a simple priority controlled T-junction with Cliffe Lane to the south western extents of the site. Initial investigation has shown that a small improvement scheme would be provided in order to ensure an appropriate standard access including sight lines can be provided. A plan showing the access scheme is included at **Enclosure 1**. As indicated in the letter attached at **Enclosure 2**, it has previously been confirmed that the local highways development control team at Kirklees Council consider the proposed residential access arrangements acceptable in principle. It is also envisaged that there will be a secondary pedestrian/cycle access point onto Ferrand Lane to the northern boundary of the site.

Cliffe Lane runs in an east to west direction to the south of the site, and is subject to a 30mph speed limit. To the east of the site Cliffe Lane becomes Latham Lane as it heads to the north to form a simple priority T-junction with West Lane. To the east, West Lane provides access to the A651 Oxford Road, from which the facilities in the centre of Gomersal can be accessed. To the north of the junction with West Lane, Latham Lane provides access to residential properties and the A58 via Drub Lane.

Continued

Continuation 2
Mr S Courcier
15-398/RD

12 January 2016

Returning to Cliffe Lane, to the west of the site, the road continues towards Cleckheaton, becoming Balme Road and forming a priority crossroads junction with the A638 Bradford Road and High Street. Facilities additional to those in the centre of Gomersal are located in the centre of Cleckheaton.

An alternative route to the centre of Gomersal is via Woodlands Road, which forms a simple priority T-junction with Cliffe Lane immediately to the south of the site. Woodlands Road continues south before meeting the A643 Spen Lane by way of a simple priority T-junction. To the east, the A643 Spen Lane meets the A651 Oxford Road in the centre of Gomersal by way of a signalised crossroads junction, which has pedestrian crossing facilities on all arms.

Returning to the Woodlands Road/A643 Spen Lane junction, to the west of the junction with Woodlands Road, the A643 Spen Lane continues towards the A638 Dewsbury Road in the centre of Cleckheaton.

Accessibility by Public Transport
The nearest bus stops to the site are on Cliffe Lane located to the east of the proposed Cliffe Lane site access, approximately 380 metres walking distance from the centre of the site. The stops are currently served by bus service number 255, which runs between Halifax and Leeds via Hipperholme, Wyke, Scholes, Cleckheaton and Birkenshaw.

Further bus stops are located on the A643 Spen Lane to the south of the site just to the west of the Woodlands Road junction, within approximately 700 metres walking distance of the centre of the site. These stops are served by bus services 220, 252, 253 and 254, in addition to the 255 service which stops on Cliffe Lane. These additional stops on Cliffe Lane provide frequent bus services, which would be attractive for future residents to use to travel to and from the site.

A summary of the timetable information for the bus services stopping on Cliffe Lane and the A643 Spen Lane is shown in the following table.

Continued

Continuation 3
Mr S Courcier
15-398/RD

12 January 2016

Service	Route	Stops	Frequency		
			Mon to Sat Daytime (mins)	Mon to Sat Evening (mins)	Sundays (mins)
255	Halifax - Leeds	Cliffe Lane	30	60 (last service from Halifax 19:10)	60
220	Huddersfield – Leeds	A643 Spen Lane	60	60 (last service from Huddersfield 18:30)	No Service
252	Dewsbury - Leeds	A643 Spen Lane	No Service	60	60 (Evening Only)
253	Dewsbury - Bradford	A643 Spen Lane	60	60	60
254	Dewsbury - Leeds	A643 Spen Lane	30	30 (up to 17:15 from Dewsbury, then 1 last service at 18:45)	60

There is therefore significant potential for public transport trips to destinations including Leeds, Dewsbury, Huddersfield, Birstall, Morley, Mirfield and Bradford.

The nearest railway station to the site is located in Dewsbury approximately 6 kilometres to the south east of the site as the crow flies. The railway station is located within approximately 300 metres walking distance of Dewsbury bus station, which is a destination for the 252, 253, and 254 bus services which serve the stops on the A643 Spen Lane. Dewsbury railway station provides regular train services to destinations including Leeds, Huddersfield, York, Manchester, Liverpool and Hull.

The 60 minute public transport catchments created using the TRACC accessibility software for both the AM and PM peak for the site are included as **Enclosure 3**. These plans show that areas including Leeds, Bradford, Morley, Batley and Cleckheaton are accessible within a maximum 60 minute catchment, with some of these areas being reached considerably quicker than the maximum.

Continued

It is therefore concluded that the site is in a sustainable location within Gomersal and is particularly well connected to Leeds and Bradford by frequent and convenient public transport services.

Accessibility for Pedestrians and Cyclists
Footways are present on both sides of Cliffe Lane in the vicinity of the site, which continue onto Woodlands Road to the south of the site. These footways continue to the south onto both sides of the A643 Spen Lane. To the east of Woodlands Road, there is a pedestrian crossing facility on the A643 Spen Lane to assist pedestrians accessing the residential areas to the south.

The footways on both sides of the A643 Spen Lane continue to the east towards the signalised crossroads junction with the A651 Oxford Road and the A643 Church Lane, where signalised pedestrian crossing facilities exist on all arms. From this point, pedestrians can access the facilities in the centre of Gomersal via footways on both sides of the A651 Oxford Road.

The walking accessibility plan created using the TRACC accessibility software is included at **Enclosure 4** and shows that a number of facilities are accessible within a maximum 2 kilometre walking catchment of the centre of the site. The plan also shows walking catchments of 400m, 800m, 1,200m and 1,600m. These facilities are detailed in later paragraphs.

In general, the majority of roads in Gomersal in the vicinity of the site are considered to be suitable for cycling. The signalised crossroads junction of the A643 Spen Road, the A651 Oxford Road and the A643 Church Lane has existing advanced cycle stop lines on all arms.

The National Cycle Route 66, also known as Spen Valley Greenway, is accessible in Cleckheaton to the west of the site. The Spen Valley Greenway is an off road cycle route which runs between Dewsbury and Bradford.

The cycling accessibility plan created using the TRACC accessibility software included at **Enclosure 5** shows the 5 kilometre and 8 kilometre cycling catchments from the centre of the site. The plan shows that areas including the centre of Gomersal, Cleckheaton, Liversedge, Batley, Birstall, Birkenshaw and Drighlington are accessible within a 5 kilometre cycling catchment, and areas including Gildersome, Morley, Dewsbury, Heckmondwike, Hipperholme, Oakenshaw and the south eastern extents of Bradford are accessible within a 8 kilometre cycling catchment. These areas include a number of retail facilities and employment opportunities, along with Dewsbury, Batley and Morley railway stations.

Continued

Continuation 5
Mr S Courcier
15-398/RD

12 January 2016

The pedestrian and cycling facilities available provide good accessibility in and around Gomersal. Appropriate pedestrian/cycle facilities would be provided within the development to complement and connect with the existing facilities.

Access to Local Facilities
Gomersal currently benefits from local facilities including a small food store, convenience shops, petrol filling station with small food store, a doctor's surgery and pharmacy, public houses, a post office, churches, day nurseries and schools. Most of these facilities are accessed off the A651 Oxford Road in the centre of Gomersal. These facilities are shown plotted on the walking accessibility plan included at **Enclosure 4**. Further facilities such as banks, opticians and dental surgeries are available in the centre of Cleckheaton, a short bus ride to the south west of the site via the number 255 service.

In terms of accessibility to retail facilities, CIHT guidelines suggest a preferred maximum walking distance of 1.2km. The walking accessibility plan at **Enclosure 4** illustrates that retail facilities, including convenience stores and a post office (generally marked in dark blue dots as 'Shops' on the plan), are accessible within a walking distance of 1.2km from the centre of the site.

There are two primary schools within Gomersal. Gomersal Primary School consists of two sites, Gomersal First School and Gomersal Middle School, both of which are located on the A651 Oxford Road to the east and south east of the site respectively. St Mary's Church of England Primary School is also located to the south east of the site accessed off Shirley's Avenue. Both of these Primary Schools are accessible on foot from the development site.

All these existing local facilities are readily accessible from the site, as is illustrated by the walking accessibility plan.

Trip Generation and Distribution
A development of around 100 dwellings would generate in the order of 65 vehicle movements in the morning and evening peak hours.

At this stage, it is assumed that traffic will distribute on the local highway network towards the major employment areas of Bradford, Leeds, Dewsbury, Huddersfield, Wakefield and Halifax. Local junctions through which development traffic will travel include:

- Woodlands Road/Cliffe Lane
- Latham Lane/West Lane
- West Lane/A651 Oxford Road
- Woodlands Road/A643 Spen Lane

Continued

Continuation 6
Mr S Courcier
15-398/RD

12 January 2016

- A643 Spen Lane/A651 Oxford Road/A643 Church Road
- Balme Road/A638 Bradford Road
- A643 St Peg Lane/A638 Dewsbury Road/A643 Parkside

Based on the likely distribution of traffic onto the local highway network, residential development of in the order of 100 units on the site is unlikely to result in a material impact on the operation of any of the above junctions. By the time the traffic is distributed onto the wider network, the resultant increase in traffic flows is likely to be well within the day to day variations in traffic flow expected on the network. As such, a development of this size is unlikely to trigger a requirement for off-site highway improvements.

Summary
To summarise, the site is in an accessible location in Gomersal with good pedestrian access to local facilities and availability of local public transport services. The site therefore meets the sustainable travel requirements of draft Policy DLP 20 of the draft Kirklees Local Plan Strategy and Policies document.

The site can be accessed via a new access onto Cliffe Lane, which meets appropriate design standards and in principle has been approved by the highway authority. Based on assumptions in relation to potential traffic generation and distribution, it is considered that a proposed residential development of around 100 dwellings on the site would not have a material impact on the operation of the local highway network.

Therefore, in conclusion, in transport and accessibility terms, there is no reason why the site should not be allocated for residential use under allocation H591 of the emerging Kirklees Local Plan.

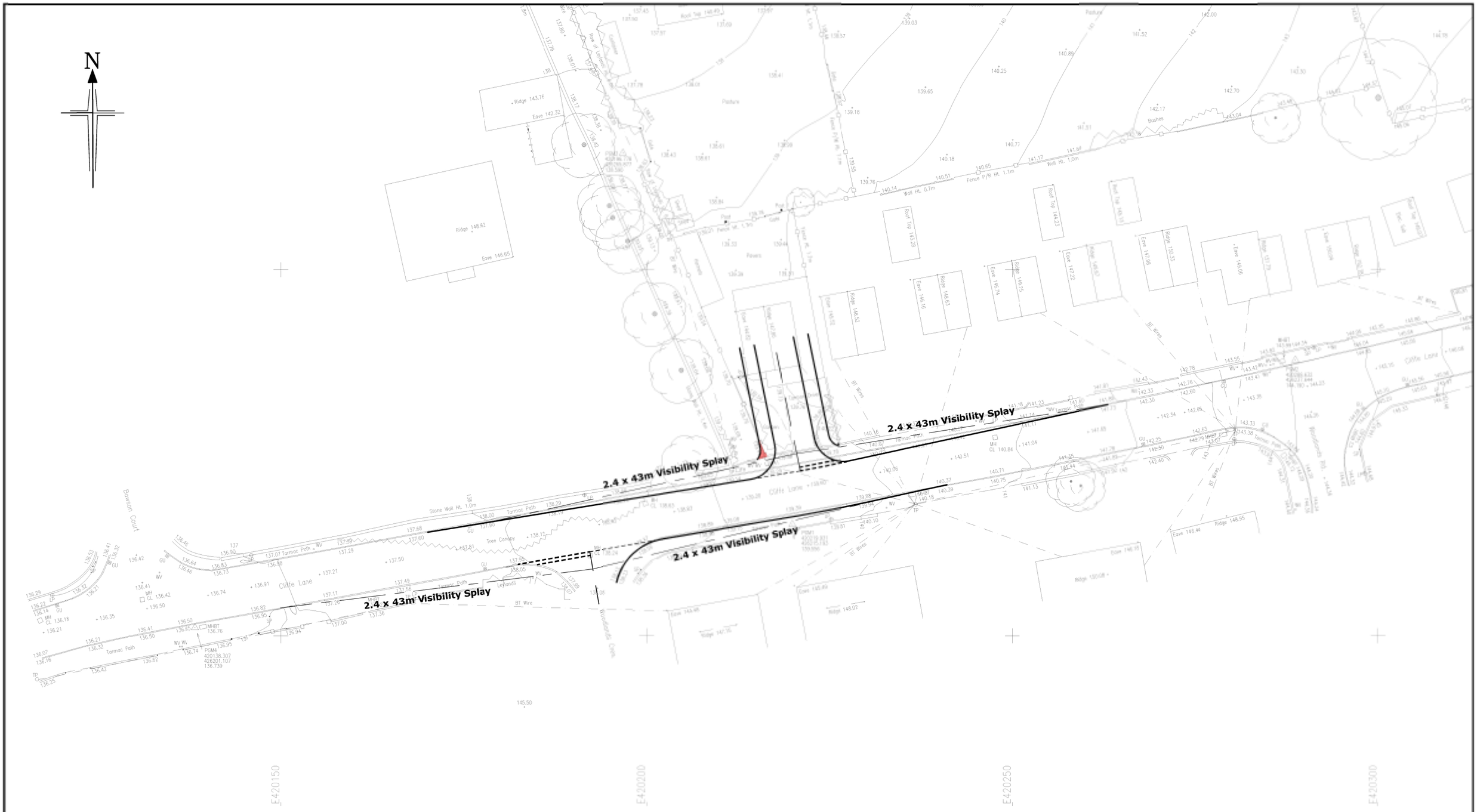
Yours sincerely

[redacted]

Robbie Donaldson

Enclosure 1 – Drawing Number 15/398/SKH/003
Enclosure 2 – Letter Dated 20 May 2014 indicating Highway Authority approval to access arrangements
Enclosure 3 – Public Transport Accessibility Plans (15/398/ACC/003 and 004)
Enclosure 4 – Walking Accessibility Plan (15/398/ACC/001)
Enclosure 5 – Cycling Accessibility Plan (15/398/ACC/002)

ENCLOSURE 1



Client:

KCS DEVELOPMENTS

Project:

CLIFFE LANE, GOMERSAL

Title

PROPOSED ACCESS ARRANGEMENT

BRYAN G HALL

CONSULTING CIVIL & TRANSPORTATION PLANNING ENGINEERS

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Rev:	Amendment:	Dm:	Chk:	Date:

Job No: 15-398 Drawn: CT Checked: JP Date: 23/11/15

Scale: 1:500 A3 - 420 x 297

Drawing No: 15/398/SKH/003

Revision:

ENCLOSURE 2

Cannon
Highways Limited

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Thorncliffe Park,
Chapeltown,
Sheffield. S35 2PH

0114 296 5653
www.cannonhighways.co.uk
Registered in England
03778944

Ref: 246/DT/01

Mr R Morton
KCS Development Ltd
3rd Floor
Goodbard House
15 Infirmary Street
Leeds,
LS1 2JS

20 May2014

Dear Richard,

Proposed Residential Development in Land to the Rear of Cliffe Lane, Gomersal

Please find enclosed a copy of our sketch number SK4 showing a possible access off Cliffe Lane that is suitable to accommodate residential development in the land to the rear of the existing houses.

The access comprises a simple priority junction with associated access road constructed within the land currently occupied by number 271 Cliffe Lane. The layout of the junction incorporates minor realignment of the existing footways and the carriageway in Cliffe Lane in order to secure the appropriate levels of junction visibility. In addition, it should be noted that the existing access to neighbouring land, located immediately adjacent to the proposed junction, should be stopped up and access to the neighbouring land incorporated into the new access road (I understand that an appropriate legal agreement is now in place to enable the existing access to the neighbouring land to be diverted and that the revised access arrangement is shown on the latest development proposals).

The local highways development control officer at Kirklees Council has reviewed the proposed access arrangements and indicated to me that they would be acceptable for the purpose of residential development. Responding, in writing, to my submission of our sketch SK4 he stated that, " *I can confirm that subject to the scale of development and the findings and conclusions or a transport assessment the proposed access arrangements are acceptable in principle to serve residential development.*

If the proposals progress to an application the submission must include an independent Stage 1 Road Safety Audit and Designer's response covering all aspects of the access arrangements.

e-mail: davetaylor39@cannonhighways.co.uk

I would reiterate that the private access directly to the west of the proposed access, which shares the alignment of Public Footpath No. SPEN/56/10 should be incorporated in to the proposed access to form a single point of access.

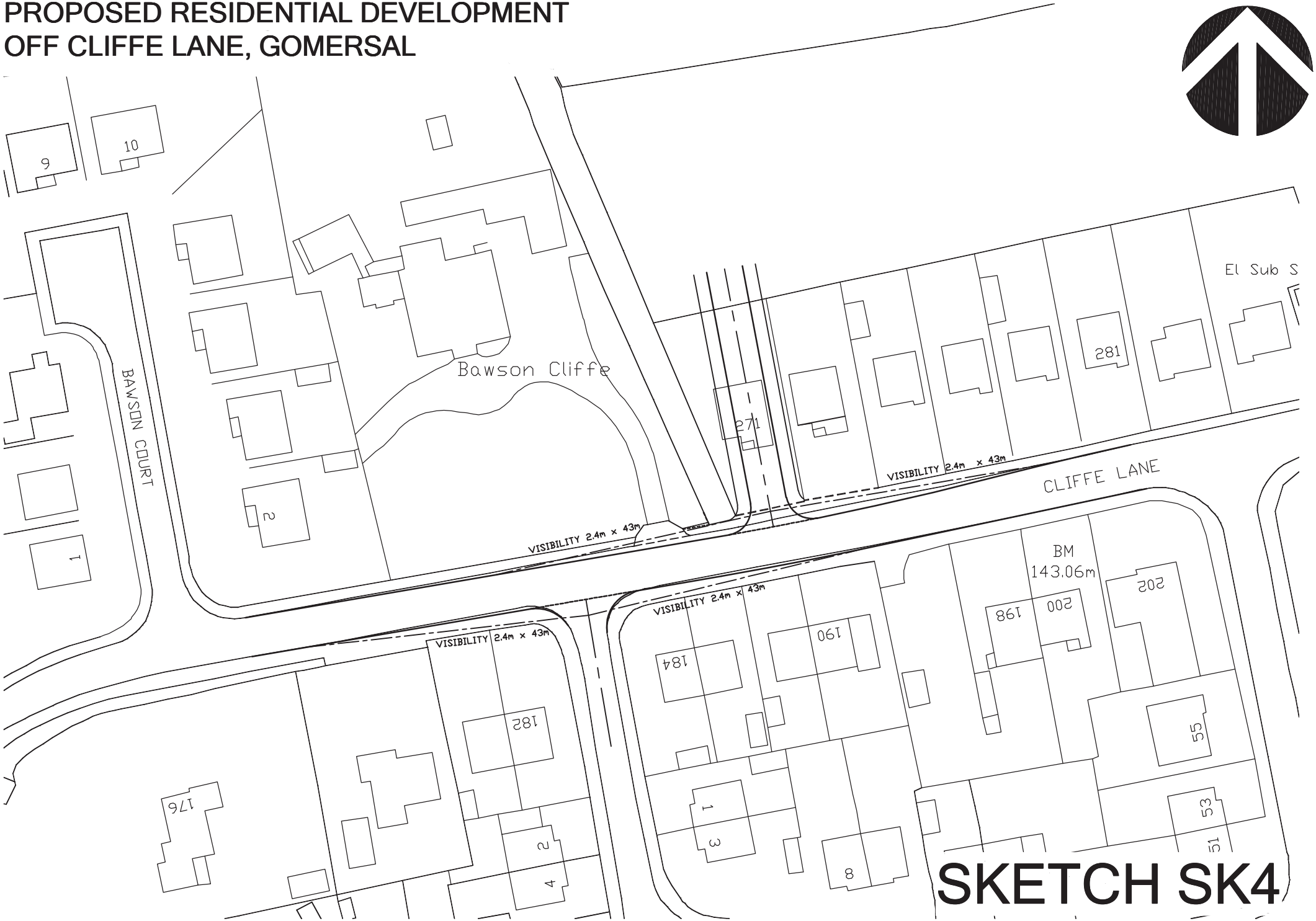
Please note this reply is given in good faith and is based on information which you have supplied or is held by the Council. Although every effort has been made to ensure the accuracy of the response it should be understood that neither the Council nor any of its Officers should be held legally responsible for the advice given, nor does this opinion prejudice the outcome of any application for planning permission to this Authority in the future."

I trust that this is satisfactory. Nevertheless, if you have any queries or would like to discuss the access arrangements in more detail please do not hesitate to contact me.

Yours sincerly,

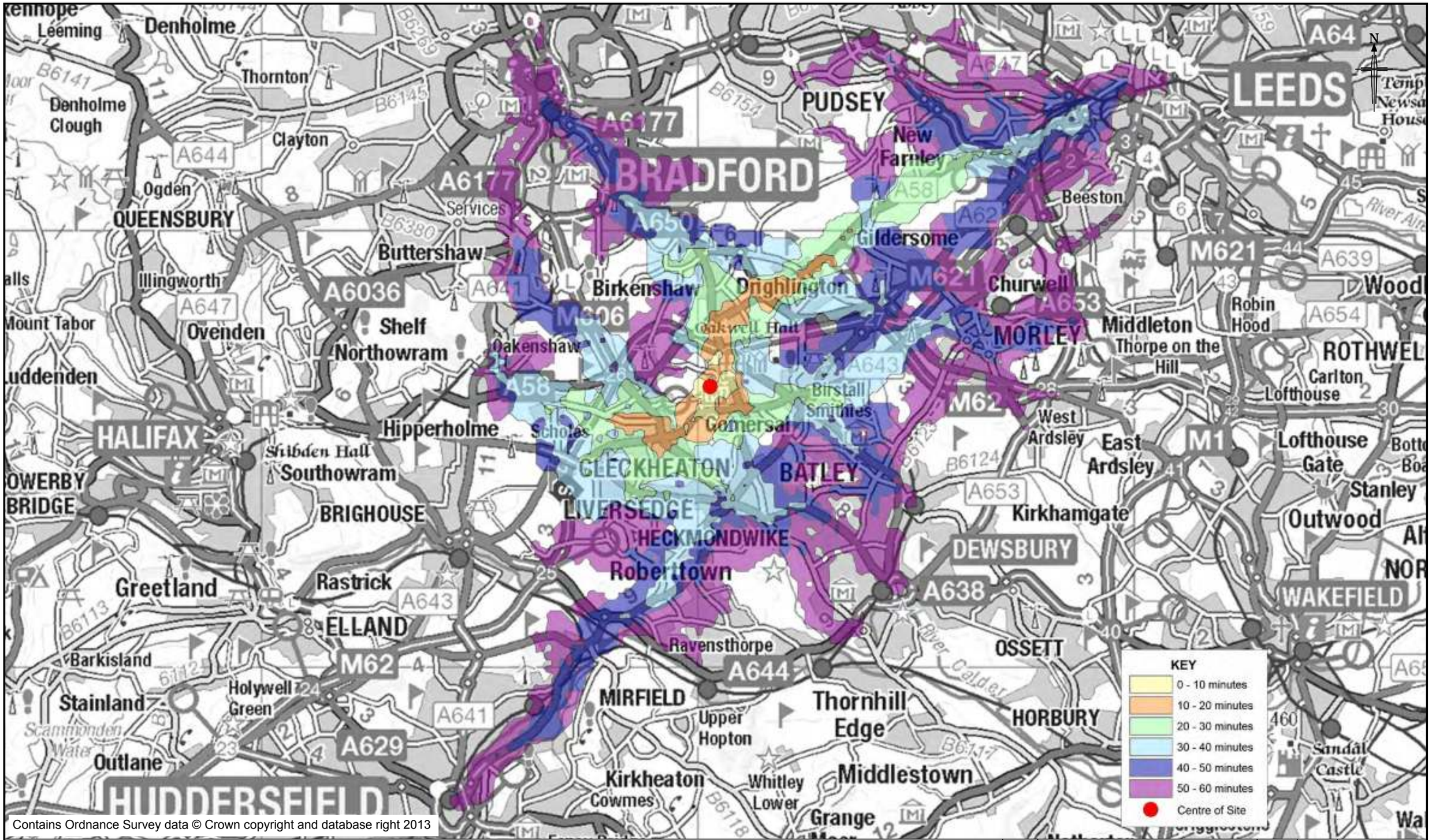
Dave Taylor

PROPOSED RESIDENTIAL DEVELOPMENT
OFF CLIFFE LANE, GOMERSAL



SKETCH SK4

ENCLOSURE 3



Client: KCS DEVELOPMENTS

Project: CLIFFE LANE, GOMERSAL

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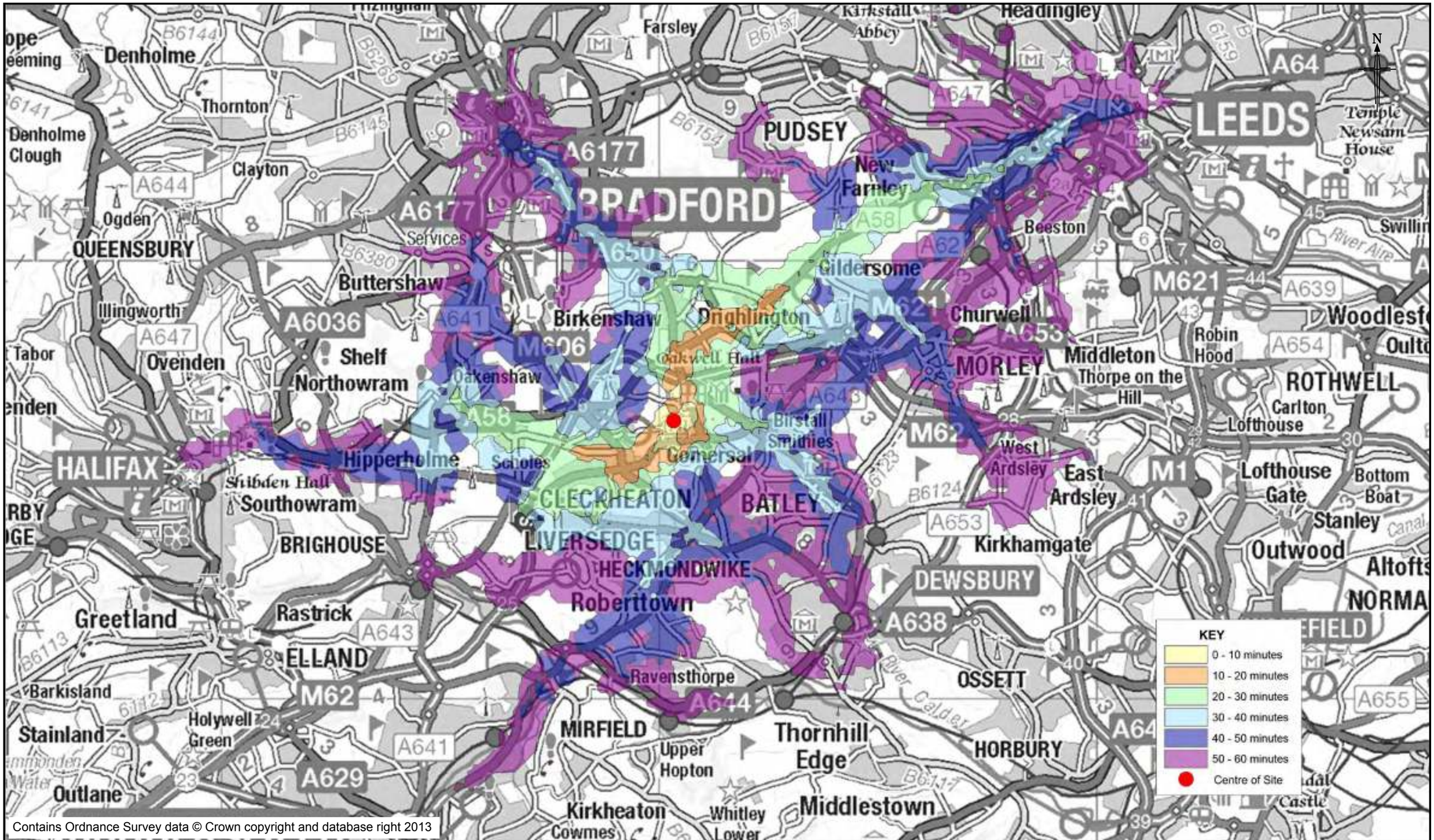
Title: TRACC PUBLIC TRANSPORT CATCHMENT
60 MINUTES, AM PEAK

Rev:	Amendment:	Drn:	Chk:	Date:

Job No: 15-398 Drawn: RD Checked: SW Date: 04-01-2016

Scale: N.T.S. (A3 - 420 x 297) Drawing No: 15/398/ACC/003 Revision:



Client: KCS DEVELOPMENTS

Project: CLIFFE LANE, GOMERSAL

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Title: TRACC PUBLIC TRANSPORT CATCHMENT
60 MINUTES, PM PEAK

Rev:	Amendment:	Drn:	Chk:	Date:

Job No: 15-398 Drawn: RD Checked: SW Date: 04-01-2016

Scale: N.T.S. (A3 - 420 x 297) Drawing No: 15/398/ACC/004 Revision:

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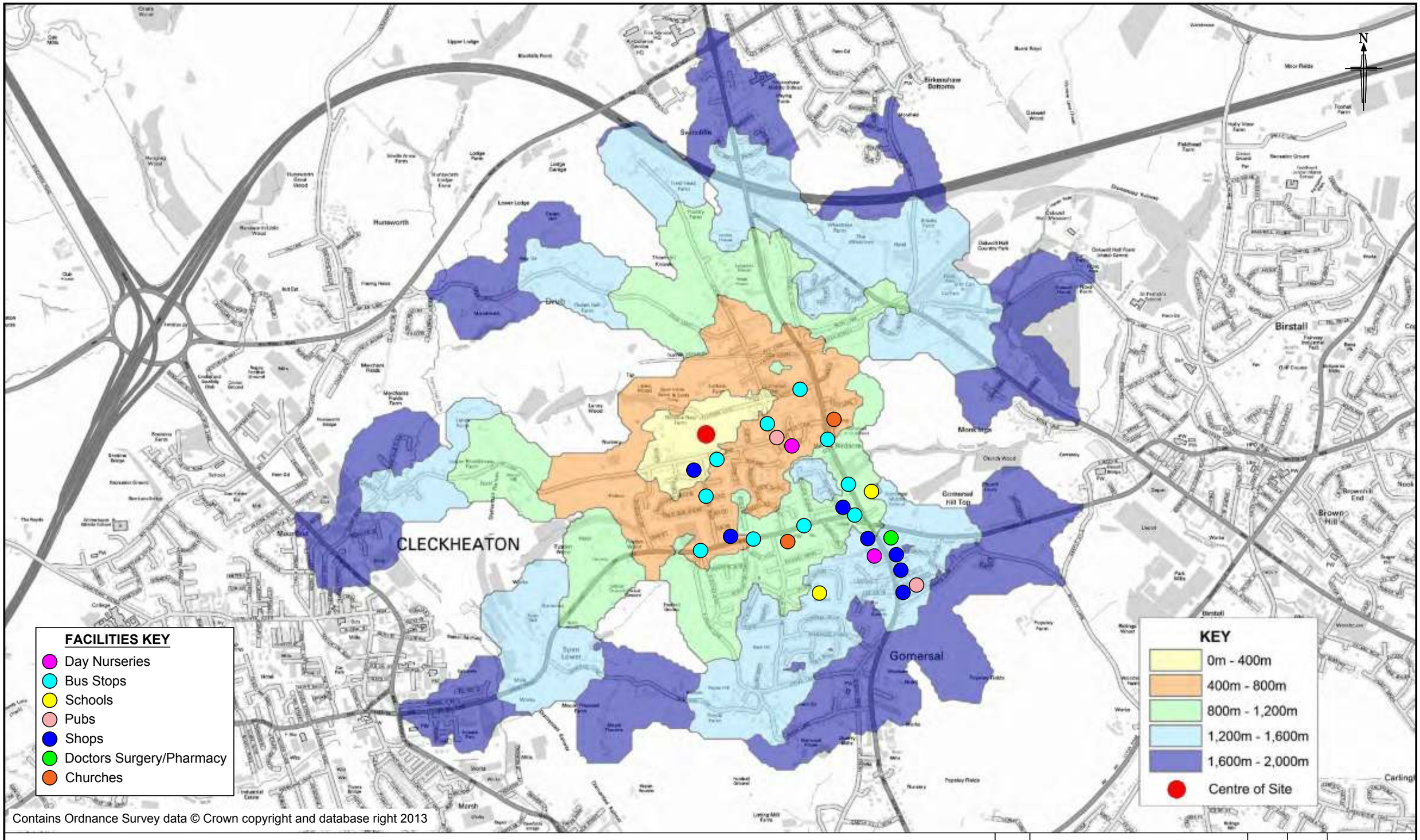

Client: KCS DEVELOPMENTS

Project: CLIFFE LANE, GOMERSAL

Title: TRACC WALKING CATCHMENT 2km

Rev:	Amendment:	Drn:	Chk:	Date:
A	Local facility point colours amended	RD	SW	12-01-2016

Job No: 15-398 Drawn: RD Checked: SW Date: 04-01-2016

Scale: N.T.S. A3 - 420 x 297 Drawing No: 15/398/ACC/001 Revision: A

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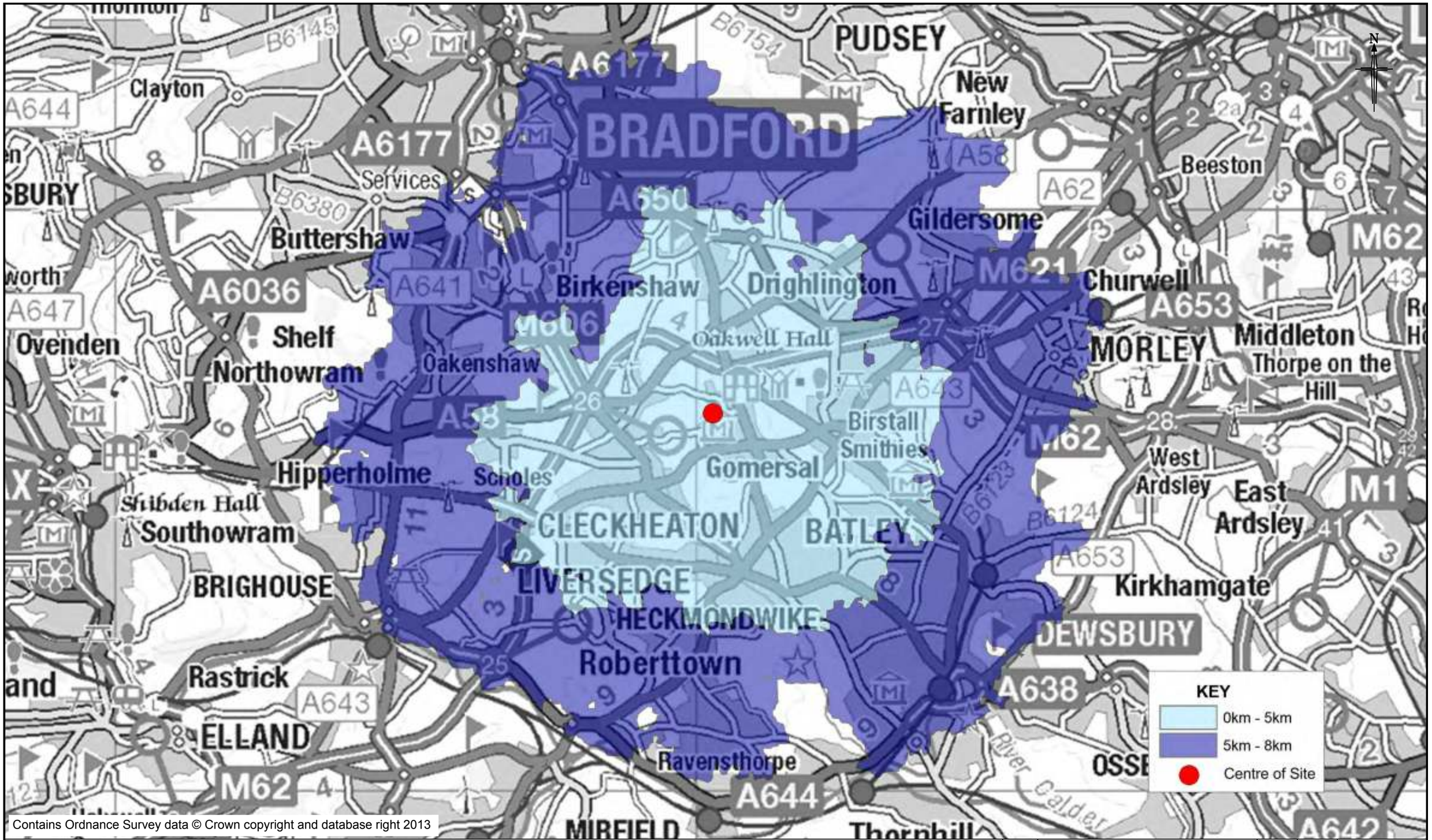
ENCLOSURE 5



Client: KCS DEVELOPMENTS

Project: CLIFFE LANE, GOMERSAL

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Title: TRACC CYCLING CATCHMENT 5km & 8km

Rev:	Amendment:	Drn:	Chk:	Date:

Job No: 15-398 Drawn: RD Checked: SW Date: 04-01-2016

Scale: N.T.S. (A3 - 420 x 297) Drawing No: 15/398/ACC/002 Revision:

Appendix 5 - Geo-Environmental Desk Study Report

Attached and submitted separately due to the file size.

Appendix 6 - Noise Assessment

Our ref: NIA/6337/15/6195/v2 Ferrand Lane Gomersal

2nd December 2015

KCS Development Ltd. c/o:

[redacted]tre

Dear Sirs,

NOISE IMPACT ASSESSMENT FOR PROPOSED RESIDENTIAL DEVELOPMENT
LAND TO THE SOUTH OF FERRAND LANE, GOMERSAL, WEST YORKSHIRE

1.00 INTRODUCTION

1.01 Environmental Noise Solutions Ltd. (ENS) has been commissioned by KCS Development Ltd. to undertake a noise impact assessment for a proposed residential development on land to the south of Ferrand Lane, Gomersal (hereafter referred to as the application site).

1.02 The objectives of the noise impact assessment were to:

- Determine the ambient noise climate at the application site,
- Assess the potential impact of the ambient noise climate on the proposed residential development with reference to pertinent guidelines, and
- Provide recommendations for a scheme of sound attenuation works, as necessary to ensure that future occupants of the proposed residential development do not experience a loss of amenity due to the ambient noise climate.

1.03 This report details the methodology and results of the assessment and provides recommendations for the building envelope (fenestration and ventilation). It has been prepared to accompany a planning application to be submitted to Kirklees Council for the proposed residential development of the application site.

1.04 This report has been prepared for KCS Development Ltd. for the sole purpose described above and no extended duty of care to any third party is implied or offered. Third parties making reference to the report should consult KCS Development Ltd. (applicant), Ellis Healey Architecture (applicant's agent) and ENS as to the extent to which the findings may be appropriate for their use.

1.05 A glossary of acoustic terms used in the main body of the text is contained in Appendix 1.

2.00 APPLICATION SITE SETTING AND PROPOSED RESIDENTIAL DEVELOPMENT

2.01 The application site is bound by:

- Ferrand Lane to the north (which comes to a dead end travelling west) with farmland opposite, the farm is surrounded by existing residential dwellings. The M62 motorway is located circa 900 metres beyond,
- Existing dwellings to the east,
- Existing dwellings to the south, fronting onto Cliffe Lane, and
- An access road adjacent to the western boundary, giving access to both residential dwellings opposite and Throstles Nest Farm towards the north-western corner of the application site.

Suite 24, Doncaster Business Innovation Centre, Ten Pound Walk, Doncaster, DN4 5HX. Tel: 01302 644001 Fax: 01302 644002
e-mail:info@environmental-noise-solutions.co.uk

2.02 It was confirmed on site by the survey engineer, having had a conversation with an individual at Thostles Nest Farm that it operates as a farm, with additional (temporary) activity measured during the course of the survey due to construction works at the farm.

2.03 During the course of the noise survey, the ambient noise climate was associated with distant road traffic noise (albeit at relatively low levels). Vehicle movements on Ferrand Lane were extremely limited and were generally associated with occasional movements from Thorstles Nest Farm. Noise from activity at Thostles Nest Farm was both occasional and relatively low in noise level (which is commensurate with the nature of business).

2.04 Planning permission for residential development is sought (circa 100 dwellings), with public open space located towards the centre of the application site. An annotated proposed layout development plan is contained in Appendix 2 for reference.

3.00 BASELINE NOISE SURVEY

3.01 In order to establish the ambient noise levels at the application site, a baseline noise survey was undertaken during the daytime period on Monday 2nd November 2015.

3.02 For the purpose of the assessment the following noise monitoring positions were adopted (see Appendix 2) in free field locations at 1.5 metres above ground level:

- MP1 northern boundary of the application site,
- MP2 northern end of the western boundary of the application site, and
- MP3 south-western corner of the application site.

3.03 Noise measurements were undertaken using a Bruel & Kjaer 2250 Type 1 integrating sound level meter. The measurement system calibration was verified immediately before the commencement of the measurement sessions and again at the end, using a Bruel & Kjaer Type 4231 calibrator. No drift in calibration level was noted. Weather conditions throughout the survey were appropriate for monitoring. Measurements consisted of A–weighted broadband parameters, together with linear octave band L_{eq} levels.

3.04 The following table contains a summary of the measurement noise data, rounded to the nearest decibel.

Table 3.1 – Noise Measurement Data

Position	Date	Time	$L_{Aeq,T}$ (dB)	$L_{A90,T}$ (dB)	$L_{A10,T}$ (dB)	$L_{A1,T}$ (dB)	Comments
MP1	2/11/15	12:09 – 12:26	52	45	53	60	Distant road traffic Wildlife (63 dB L_{AFMax})
		13:54 – 14:09	53	46	58	66	Distant road traffic Farm vehicle pass (74 dB L_{AFMax})
MP2	2/11/15	12:54 – 13:24	53	46	56	62	Distant road traffic Occasional engine noise and fork lift truck Farm activity (66 dB L_{AFMax})
		14:15 – 14:35	49	44	52	58	Distant road traffic Farm activity slightly reduced in comparison to 12:54-13:24 (64 dB L_{AFMax})
MP3	2/11/15	13:44 – 13:50	53	46	55	57	Wildlife noise (60 dB L_{AFMax}) Distant road traffic
		14:39 – 14:57	54	45	56	63	Increased wildlife activity (66 dB L_{AFMax}) Aircraft and distant road traffic
Relatively Low Ambient Noise Climate Across The Application Site							

3.05 The ambient noise levels at the application site are relatively low and are considered commensurate with the setting.

4.00 NOISE IMPACT ASSESSMENT

4.01 Kirklees Council's Noise Design Advice Appendix 1 provides acceptable internal and garden noise levels generally in accordance with levels given in BS 8233:2014 'Guidance on sound insulation and noise reduction for buildings' (BS 8233). These levels are reproduced in Table 4.1 below.

Table 4.1 – Indoor Ambient Noise Levels in Dwellings

Room/Area	07:00 – 23:00	23:00 – 07:00	23:00 – 07:00	23:00 – 07:00
Living Rooms/Studies	35 dB $L_{Aeq,16hour}$	-	-	-
Gardens	55 dB $L_{Aeq,16hour}$	-	-	-
Bedrooms	-	30 dB $L_{Aeq,8hour}$	45 dB $L_{A1,15min}$	55 dB L_{AFMax}

4.02 The sound insulation provided by standard double glazed windows with standard trickle vents in a masonry façade is of the order of 27 dB(A); see Appendix 3 for a generic noise break-in calculation.

4.03 With noise levels at the site measured between 49 – 54 dB $L_{Aeq,T}$ during the daytime period, the predicted internal ambient noise levels across the site will be of the region to 22 – 27 dB $L_{Aeq,T}$ during this period. For reference, the remaining guidance set out in Kirklees Council's Noise Design Advice Appendix 1 will be met across the site with standard double glazing and ventilation.

4.04 In accordance with Kirklees guidance, there is no issue with respect to garden amenity.

5.00 CONCLUSIONS

5.01 A noise impact assessment has been undertaken for a proposed residential development (circa 100 dwellings) on land to the south of Ferrand Lane, Gomersal.

5.02 The ambient noise climate across the application site is associated with distant road traffic noise and is relatively low.

5.03 A scheme of sound insulation works been developed to protect the proposed residential development from the ambient noise climate in accordance with the requirements of Kirklees Council's Noise Design Advice. On this basis, the ambient noise climate is not considered to represent a constraint to the proposed residential development.

5.04 Nearby residential dwellings will potentially be subject to impact from construction noise associated with the development of the application site. Construction noise is however temporary in nature. Through a combination of good site practices, location of plant and scheduling/phasing of work, it is considered that the noise impact upon local residents due to construction noise can be reduced to a minimum.

I trust the foregoing is sufficient for your needs. Should you have any queries regarding the above, please do not hesitate to contact me.

Yours sincerely,

[redacted]

Daniel Bailey
MIOA, Diploma in Acoustics and Noise Control, BSc (Hons)
Environmental Noise Solutions Limited

Continued from page 3

cc File

Appendix 1
Glossary of Acoustic Terms

Sound Pressure Level (L_p)

The basic unit of sound measurement is the sound pressure level. As the pressures to which the human ear responds can range from 20 µPa to 200 Pa, a linear measurement of sound levels would involve many orders of magnitude. Consequently, the pressures are converted to a logarithmic scale and expressed in decibels (dB) as follows:

$$L_p = 20 \log_{10}(p/p_0)$$

Where L_p = sound pressure level in dB; p = rms sound pressure in Pa; and p_0 = reference sound pressure (20 µPa).

A-weighting Network

A frequency filtering system in a sound level meter, which approximates under defined conditions the frequency response of the human ear. The A-weighted sound pressure level, expressed in dB(A), has been shown to correlate well with subjective response to noise.

Equivalent continuous A-weighted sound pressure level, $L_{Aeq, T}$

The value of the A-weighted sound pressure level in decibels of continuous steady sound that within a specified time interval, T, has the same mean-square sound pressure as a sound that varies with time. $L_{Aeq, 16h}$ (07:00 to 23:00 hours) and $L_{Aeq, 8h}$ (23:00 to 07:00 hours) are used to qualify daytime and night time noise levels.

$L_{A10, T}$

The A-weighted sound pressure level in decibels exceeded for 10% of the measurement period, T. $L_{A10, 18h}$ is the arithmetic mean of the 18 hourly values from 06:00 to 24:00 hours.

$L_{A90, T}$

The A-weighted sound pressure level of the residual noise in decibels exceeded 90% of a given time interval, T. L_{A90} is typically taken as representative of background noise.

$L_{AF\ max}$

The maximum A-weighted noise level recorded during the measurement period. The subscript 'F' denotes fast time weighting, slow time weighting 'S' is also used.

Sound Exposure Level (SEL or L_{AE})

The energy produced by a discrete noise event averaged over one second, no matter how long the event actually took. This allows for comparison between different noise events which occur over different lengths of time.

Weighted Sound Reduction Index (R_W)

Single number quantity which characterises the airborne sound insulation properties of a material or building element over a defined range of frequencies (R_W is used to characterise the insulation of a material or product that has been measured in a laboratory).

Appendix 2
Approximate Noise Monitoring Positions and Site Layout Plan

Appendix 3
BRE Building Envelope Insulation Model