Technical Paper

Dated: 22nd January 2020. Version 00

RESPONSE TO CONSULTATION TO THE EMERGING STROUD DISTRICT COUNCIL DRAFT LOCAL PLAN 2019-2031

REPRESENTATION MADE IN RELATION TO:

PS41 Washwell Fields

1. Introduction

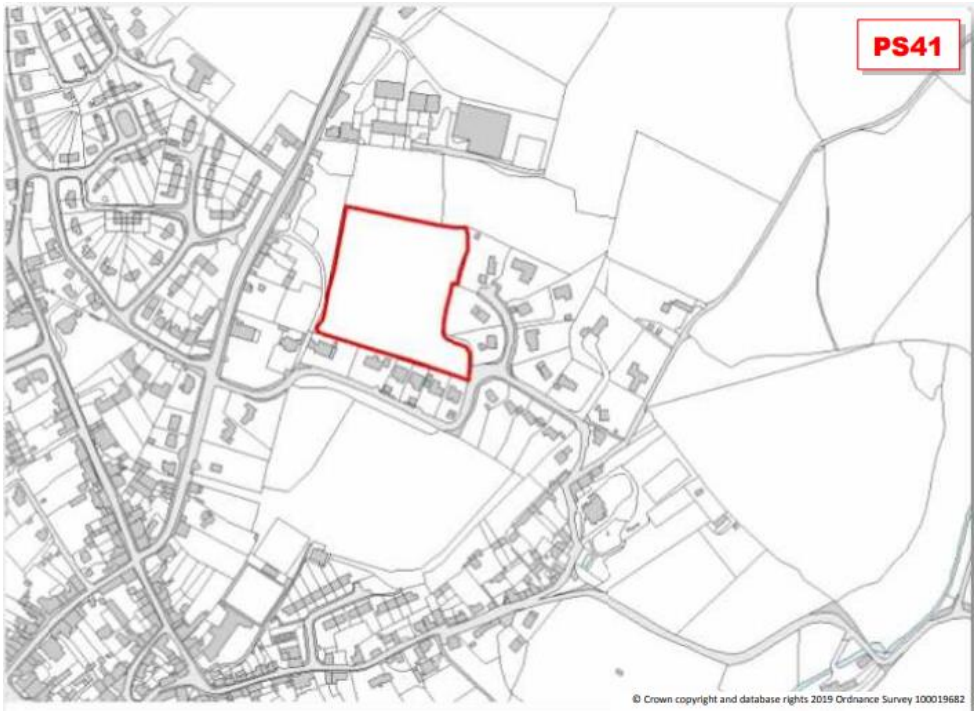
1.1 This representation has been prepared on behalf of Charterhouse Strategic Land Ltd as part of the Regulation 18 consultation process being undertaken in respect of the emerging Stroud District Council Local Plan 2019 – 2031.

1.2 This Technical Paper provides our representations in respect of policy **PS41-Washwell Fields** which has informed our position to **OBJECT** to its proposed allocation within the Plan.

1.3 Indeed, this Paper identifies the proposed allocation at Washwell Fields would be contrary to the fundamental policy objectives and principles of both national and local policies and that any allocation of Washwell Fields would be **sufficient to make the Plan unsound**.

1.4 In line with the Stroud District Local Plan Review document PS41 Washwell Fields is allocated for a development comprising up to 20 dwellings and associated community and open space uses and strategic landscaping. For context the site location plan is shown in Figure 1 below.

Figure 1 - Site Location Plan



T. 0117 2441 970 hello@calibro-consultants.com www.calibro-consultants.com
Whitefriars Business Centre | 2nd Floor | Whitefriars | Lewins Mead | Bristol | BS1 2NT

1.5 The proposed policy PS41 does not provide any detailed information on the proposed access strategies or how the proposed allocation may accord with the wider objectives of the emerging Local Plan. Indeed, it confirms that detailed considerations will be deferred and *"policy criteria will be developed where necessary to highlight specific mitigation measures and infrastructure requirements."*

1.6 However, the critique set out within this representation identifies that it is improbable that any allocation of the site could be mitigated to such a level that would avoid conflict with the NPPF and particularly its requirement for *"plans [to] be prepared with the objective of contributing to the achievement of sustainable development"* (16a) and that they should *"be prepared positively, in a way that is aspirational but deliverable"* (16b).

1.7 These representations are therefore written in the hope that the technical analyses undertaken assist the Local Planning Authority and Inspector in their on-going efforts to prepare an ambitious and deliverable plan that meets the local needs.

T. 0117 2441 970 hello@calibro-consultants.com www.calibro-consultants.com
Whitefriars Business Centre | 2nd Floor | Whitefriars | Lewins Mead | Bristol | BS1 2NT

2. Proposed Means of Access

Site Access

2.1 The draft allocation plan policy does not identify any form of access strategy to the site and instead implies that this is a matter of detail that can be determined in the future.

2.2 However, on initial inspection of the allocation site, it would appear that only two potential connections to the public highway are physically possible, these being a single track lane that runs alongside The Red House and acts as a private driveway access to Washwell Cottages, whilst direct frontage access could potentially be made onto Lower Washwell Lane at the site's south-eastern corner.

2.3 It is noted that the private driveway access leading to Washwell Cottages is in third party ownership and lies beyond the allocation boundary, such that its potential to serve as access to the proposed allocation site is severely questionable. Nevertheless, the existing track is typically 2.8-metres wide and the properties of both the Wynstowe House and The Red House immediately abut the track, precluding the ability to upgrade the access to two-way operation, as would be required to satisfy the terms of paragraph 108b of the NPPF (i.e. to provide safe and efficient access to all users).

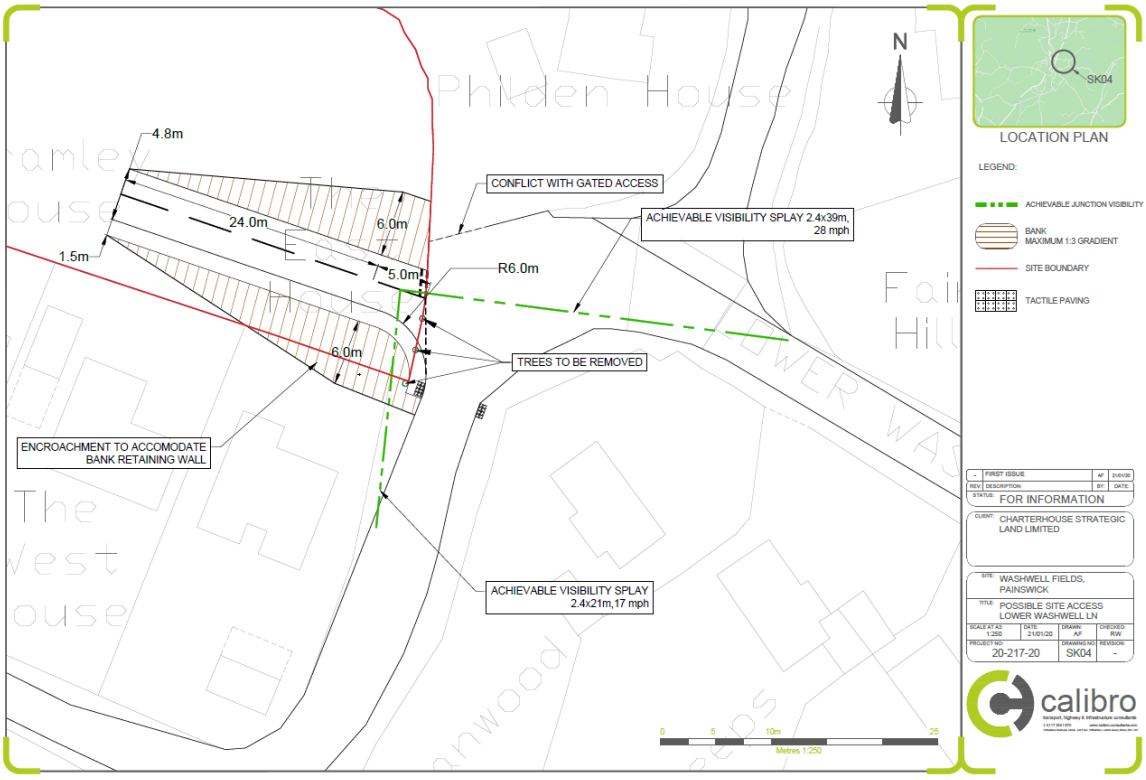
2.4 On this basis, an access via the private driveway leading to Washwell Cottages is both undeliverable in the context of land control and technical compliance.

2.5 Consequently, the only opportunity to create access is at the sites south-eastern corner, where the boundary provides frontage onto Lower Washwell Road over a distance circa 15-metres, and on the outside of a 90-degree bend and immediately adjacent the driveway access serving Philden House.

2.6 On this basis, there are limited opportunities to create an access into the site and the below appraisal identifies the most likely solution, and which identifies a number residual issues that may jeopardise delivery of the site, particularly when considered alongside non-car connectivity and highway safety (as discussed in Section 4 of this report). The site access drawing is shown in the below figure and to a larger scale at Appendix A of this report.

T. 0117 2441 970 hello@calibro-consultants.com www.calibro-consultants.com
Whitefriars Business Centre I 2nd Floor I Whitefriars I Lewins Mead I Bristol I BS1 2NT

Figure 2 – Site Access



2.7 The above design is based on a standard priority T-junction arrangement with a 4.8-metre wide access road, which provides a proportionate specification given the scale of the proposed development in so much that it accommodates a large vehicle passing a car, in line with Figure 7-1 of Manual for Streets. Allied to this, a 1.5-metre wide contiguous footway has been shown on the western side of the access, to connect into the footway on Lower Washwell Lane.

2.8 As indicated in the above, an access in this location would result in the removal of the mature trees that exist on the site's frontage although it is unclear whether these are subject to Tree Preservation Orders. Furthermore, allowance for the level change between the carriageway of Lower Washwell Lane and the site confirms that a standard embankment design is not achievable without impacting on adjoining boundaries and therefore retaining wall structures would be required at additional expense.

2.9 The level change would also sterilise a relatively significant part of the site by virtue of the need to grade up over a distance over circa 30-metres. It is unclear this encroachment into the site would affect the development capacity of the site.

2.10 The above design also identifies the achievable visibility splays would be 21-metres to the west and 39-metres to the east, from a 2.4-metre setback, whereas the posted 20mph speed limit would suggest a requirement of 25-metres. Indeed, the achievable visibility splays are commensurate with approach speeds of 16mph and 28mph, respectively. For the avoidance of doubt, on-site observations suggest broad correlation between vehicle speeds and the posted speed limit.

2.11 In this way the junction would be substandard on visibility and its related impact on highway safety contrary to paragraph 108b of the NPPF.

T. 0117 2441 970 hello@calibro-consultants.com www.calibro-consultants.com
Whitefriars Business Centre | 2nd Floor | Whitefriars | Lewins Mead | Bristol | BS1 2NT

2.12 Furthermore, it is noted that the anticipated site access would cause conflict with the adjacent access to the Philden House property and this is likely to be sufficient to cause the design to fail an independent Road Safety Audit. In this way, the proposals would give rise to an unacceptable safety risk, contrary to paragraph 108b of the NPPF.

T. 0117 2441 970 hello@calibro-consultants.com www.calibro-consultants.com
Whitefriars Business Centre | 2nd Floor | Whitefriars | Lewins Mead | Bristol | BS1 2NT

3. Off-Site Highway Matters

Introduction

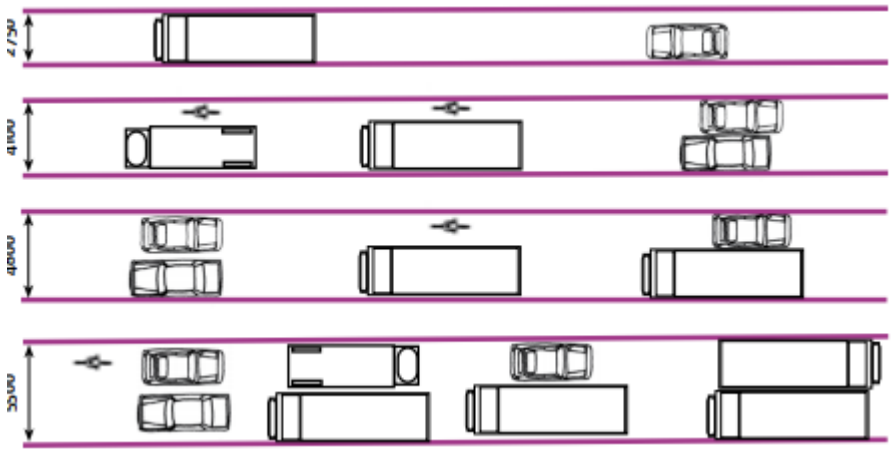
3.1 Given the location of the site and its likely means of vehicular access there is a recognised dependence on wider access via Lower Washwell Lane, and particularly its junction to the A46-Cheltenham Road. this section of the report therefore critiques the geometry and safety of the interconnecting route, with a view to establishing whether other pertinent barriers to delivery exist.

Lower Washwell Lane

3.2 Lower Washwell Lane connects the sites south-eastern boundary to Cheltenham Road via a single lane carriageway road. The effective width of Lower Washwell Lane has been considered by detailed Ordnance Survey mapping adjusted to reflect on-site measurements, and categorised in the subsequent figure using the following categories;

- <4.1-metres (shaded grey) – is considered to be one-way operation;
- 4.1-4.8-metres (shaded purple) – allows for two-way traffic by car only;
- 4.8-5.5-metres (shaded red) – allows for two-way traffic by one direction of goods vehicle traffic passing a car; and
- >5.5-metres (shaded orange) – allows for two-way by all traffic.

3.3 The above measurements reflect figure 7-1 of MfS, which is extracted below for convenience.



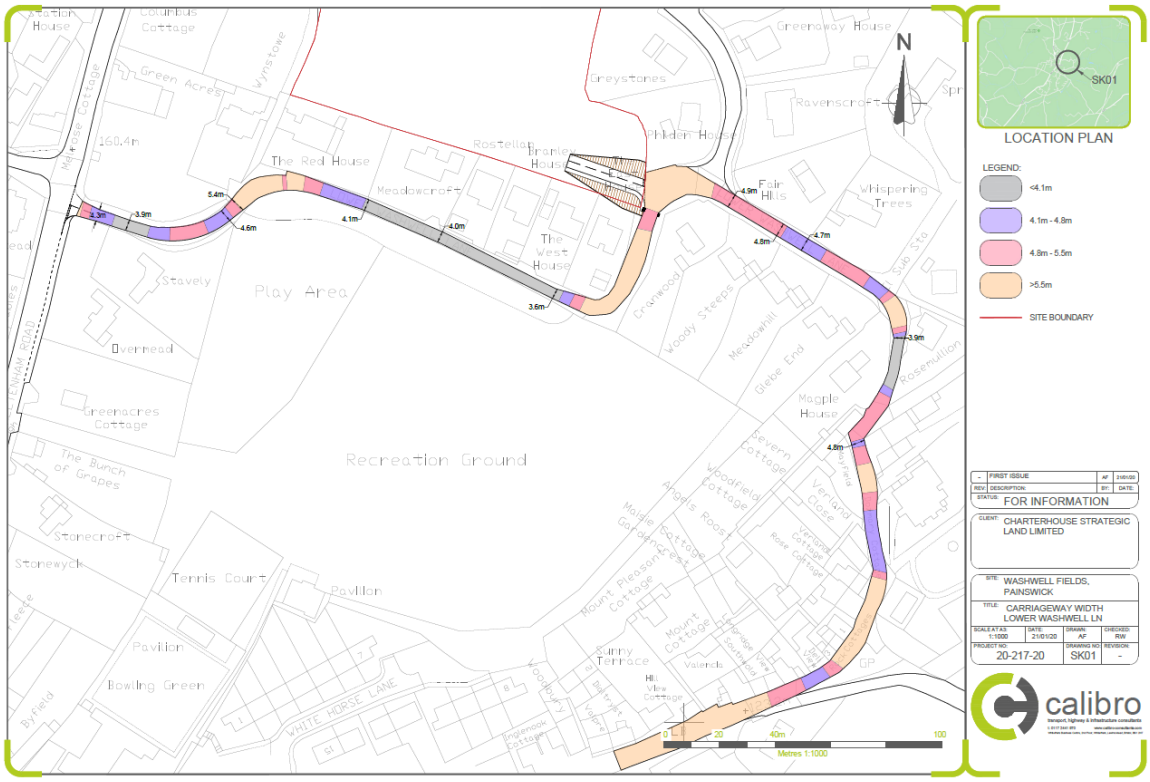
3.4 For the avoidance of doubt, the below analysis recognises the limited extent of highway verge but robustly assumes these will be retained to protect intervisiblity from the plethora of private driveways that access onto the lane. In this way, it is assumed there is no realistic prospect for localised widening.

3.5 Furthermore, it is noted that any localised widening would have the potential to alter the character of the lane, which may need to be considered in other technical appraisals.

T. 0117 2441 970 hello@calibro-consultants.com www.calibro-consultants.com
Whitefriars Business Centre | 2nd Floor | Whitefriars | Lewins Mead | Bristol | BS1 2NT

3.6 The effective road width along Lower Washwell Lane has been shown in the below figure and to a larger scale at Appendix B of this report.

Figure 3 – Lower Washwell Lane Carriageway Widths



3.7 It is evident from the above analysis that significant proportions of Lower Washwell Lane are forced to operate as one-way by virtue of the carriageway width and it is notable that such sections are located between blind bends (refer to Paragraphs 3.9-3.11), which prohibit the ability to informally manage priority through these sections. Consequently, it is considered that there is likely to be an increase in unacceptable risk along the carriageway, particularly involving delivery and refuse vehicles (refer to Paragraphs 3.17-3.19).

3.8 The constraints of highway geometry are shown in the below photograph for context.

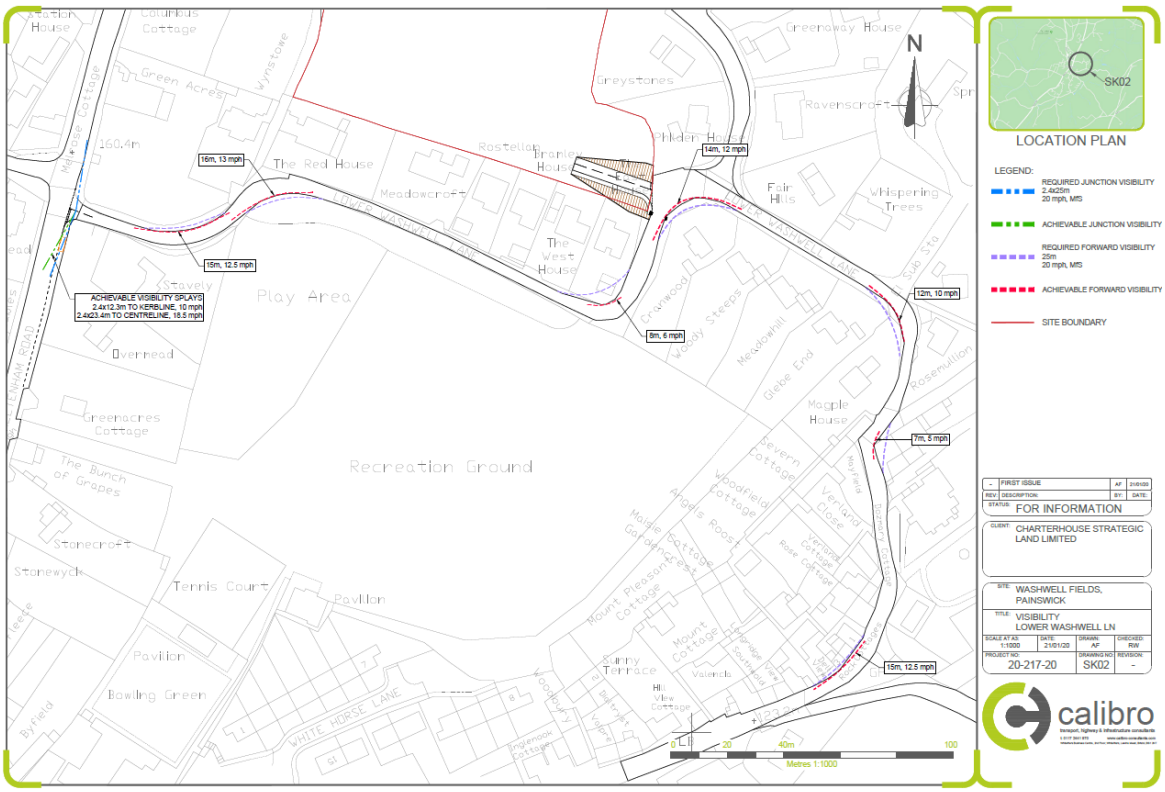
T. 0117 2441 970 hello@calibro-consultants.com www.calibro-consultants.com
Whitefriars Business Centre I 2nd Floor I Whitefriars I Lewins Mead I Bristol I BS1 2NT

Figure 4 - Lower Washwell Lane – South of The Red House - Eastbound

3.9 In combination with the physical extent of carriageway, Lower Washwell Lane is noted to provide limited forward visibility at the expense of highway safety risk. Indeed, this has been assessed in the below figure, which is provided at a larger scale at Appendix C, which shows that forward visibility ranges from circa 7-metres to a maximum of 16-metres; this being commensurate to vehicular speeds ranging from 5mph - 13mph respectively.

T. 0117 2441 970 hello@calibro-consultants.com www.calibro-consultants.com
Whitefriars Business Centre | 2nd Floor | Whitefriars | Lewins Mead | Bristol | BS1 2NT

Figure 5 – Lower Washwell Lane Forward Visibility



3.10 Consequently, it is evident that visibility is substandard and the effect of this would be either;

- An increased risk of front-end collisions; or
- A need for vehicles to reverse over potentially significant distances where there remains inadequate visibility and potentially in conflict with pedestrians, to a point that would allow two vehicles to pass.

3.11 In either of the above cases there would be an unacceptable risk to highway safety contrary to paragraph 108b of the NPPF.

3.12 Indeed, on-site observations have identified evidence of vehicles overrunning the highway verge, which is indicative of the metalled road surface being too narrow to accommodate existing traffic types and levels, and this is likely to have been compounded by the substandard visibility through the bends along the lane.

3.13 Photographic evidence of the above is shown in Figure 6 below.

T. 0117 2441 970 hello@calibro-consultants.com www.calibro-consultants.com
Whitefriars Business Centre I 2nd Floor I Whitefriars I Lewins Mead I Bristol I BS1 2NT

Figure 6 – Lower Washwell Lane EB – North of Stavely House

Figure 7 – Lower Washwell Lane EB – South of The West House

T. 0117 2441 970 hello@calibro-consultants.com www.calibro-consultants.com
Whitefriars Business Centre | 2nd Floor | Whitefriars | Lewins Mead | Bristol | BS1 2NT

3.14 It is also evident from both aerial imagery (Google Earth) and on-site observations that there is occasional on-street car parking that occurs along different parts of Lower Washwell Lane. However, anecdotal evidence from local residents suggests that relatively high levels of on-street car parking also occur along the lane, to the north of the recreation ground, particularly on weekends.

3.15 In this regard, the potential conflict and impact on highway safety and efficiency could be even greater and it is therefore highly improbable that an adequate solution can be found to overcome paragraph 108 of the NPPF.

3.16 As such, the proposed allocation is considered to be undeliverable and its inclusion within the plan could render it unsound.

T. 0117 2441 970 hello@calibro-consultants.com www.calibro-consultants.com
Whitefriars Business Centre | 2nd Floor | Whitefriars | Lewins Mead | Bristol | BS1 2NT

Service Arrangements

3.17 As part of any proposal it is necessary to ensure suitable arrangements are made for refuse collection vehicles, emergency, and delivery vehicles. For simplicity, this assessment has focused on refuse collection vehicles, which may be taken as a reasonable proxy for all large vehicles.

3.18 In this regard, swept-path analyses have been undertaken assuming a 10.5-metre rigid refuse vehicle, which is at the lower end of the range. The results are shown below in Figure 8 (and to a larger scale at Appendix D) which demonstrate that a refuse vehicle of this size could physically travel to the site via Lower Washwell Lane. However, this ignores the constraints imposed by substandard visibilities as shown in Figure 5 and plate two confirms that it would not be possible for any vehicle type to pass concurrently. Consequently, any opposing traffic would be required to reverse potentially significant distance, around blind bends and potentially in conflict with pedestrian movements.

3.19 Consequently, development at this location may give rise to an unacceptable highway safety risk, contrary to paragraph 108 of the NPPF.

Figure 8 - Refuse Vehicle Swept-Path Analysis

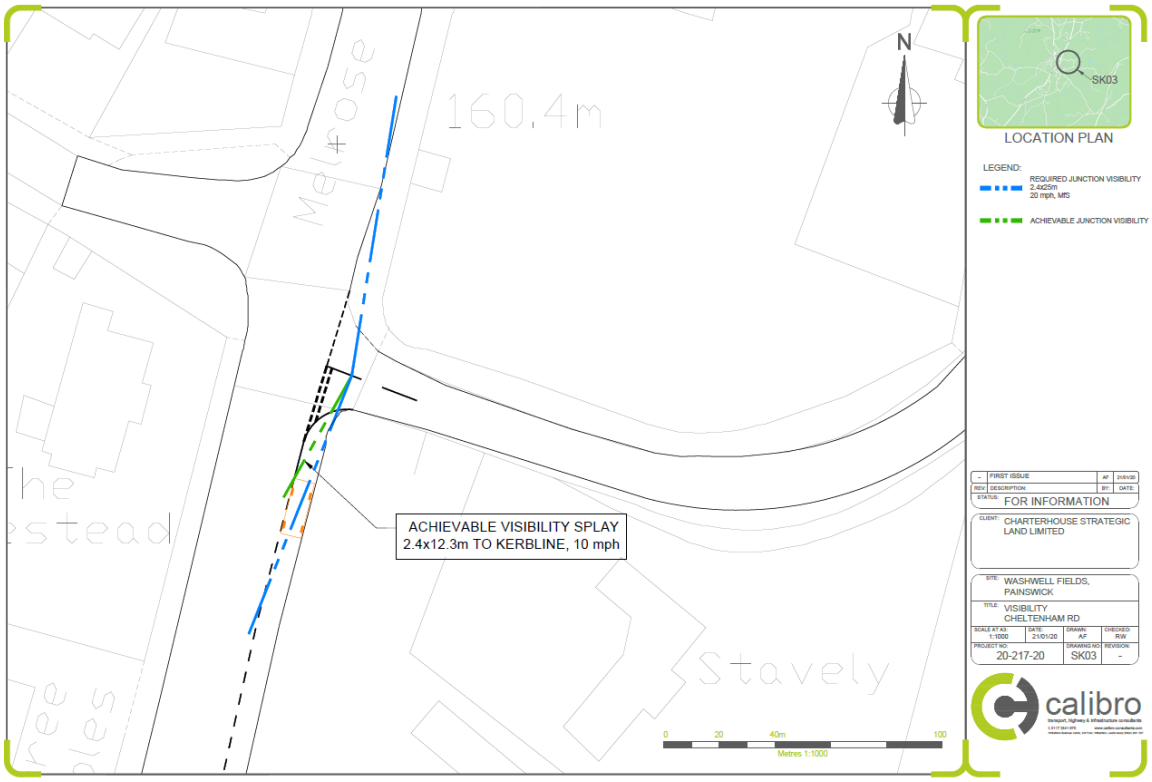
T. 0117 2441 970 hello@calibro-consultants.com www.calibro-consultants.com
Whitefriars Business Centre | 2nd Floor | Whitefriars | Lewins Mead | Bristol | BS1 2NT

A46-Cheltenham Road / Lower Washwell Lane Priority Junction

3.20 Given the nature and form of the surrounding highway network and with consideration of the anticipated distribution of traffic to and from the site, the majority of vehicular traffic is anticipated to utilise the A46-Cheltenham Road, to the west of the site.

3.21 A review of the geometry of the junction, including visibility analysis has been undertaken, the results of which have been provided in the figure below, with a larger scale version contained at Appendix E of this report.

Figure 9 – A46-Cheltenham Road / Lower Washwell Lane Junction – Achievable Visibility Splay Analysis



3.22 The above analysis identifies the achievable visibility splay to be 12.3-metres to the south, given the highly frequency of on-street parking shown, and 25-metres to the north. MfS guidance suggests a requirement of 25-metres for a 20mph road, however, on-site observation suggest vehicle approach speeds are likely to be higher and therefore visibility requirements are likely to be greater.

3.23 Consequently, the junction is, substandard in the context of visibility and is therefore likely to result in an increased risk of personal injury accidents, contrary to the NPPF.

T. 0117 2441 970 hello@calibro-consultants.com www.calibro-consultants.com
Whitefriars Business Centre | 2nd Floor | Whitefriars | Lewins Mead | Bristol | BS1 2NT

4. Conflict with Non-Vehicular Users

4.1 The only formal pedestrian infrastructure in the vicinity of the proposed allocation is a contiguous footway on the southern side of Lower Washwell Lane that connects the site to the nearby Recreation Ground, some 46-metres south. Thereafter, there is no formal provision along Lower Washwell Lane.

4.2 The footpath on the southern side of Lower Washwell Lane, opposite the proposed allocations also continues in a south-east direction over a distance before pedestrian are forced to walk in the carriageway, in conflict with vehicular traffic.

4.3 The lack of dedicated pedestrian infrastructure gives rise to pedestrian walking in the carriageway, and in particular young school children who have yet to fully form and appreciation of risk and are therefore particularly vulnerable. This has been evidenced on site and is shown in the below figure.

Figure 10 - Pedestrian Usage of Lower Washwell Lane

4.4 The potential for pedestrians to travel in the carriageway is increased by the presence of four gated entrances to the Recreation Ground, accessed directly from the carriageway. On-site observations of wear patterns (shown in the below figure) suggest that all entrances are well used. However, in some cases pedestrians would enter directly onto the carriageway with substandard visibility from the gated access, increasing exposure to oncoming traffic.

T. 0117 2441 970 hello@calibro-consultants.com www.calibro-consultants.com
Whitefriars Business Centre | 2nd Floor | Whitefriars | Lewins Mead | Bristol | BS1 2NT

Figure 11 – Gated Pedestrian Accesses to Playing Fields

4.5 As such, regular user conflict is likely to occur between pedestrians and vehicles along Lower Washwell Lane, which will give rise to undue safety risk, contrary to Strategic Objective SO1a of the Draft Local Plan.

4.6 To minimise any unacceptable safety risk along the lane it is noted that the informal footpath along the adjacent playing fields could be upgraded to form a 'trim trail' or similar all weather surface track, allowing for pedestrians to undertake journeys east > west and north> south away from the carriageway.

Section Conclusion

4.7 On the basis of the above evidence the proposed allocation would fail to provide safe and convenient access for non-car users, resulting in an unnecessary bias toward private car travel. In this way, the proposed allocation would be contrary to the sustainability objectives of the NPPF as well as;

- Strategic Objective SO4 aims to…by using new technologies, active travel and/or smarter choices, working towards a more integrated transport system to improve access to local goods and services.;
- Core Policy DCP1 "designed to discourage the use of private car, irrespective of fuel source, by prioritising in order of importance: walking, cyclin and public transport to deliver the highest possible share of trips by the most sustainable travel modes.";

T. 0117 2441 970 hello@calibro-consultants.com www.calibro-consultants.com
Whitefriars Business Centre | 2nd Floor | Whitefriars | Lewins Mead | Bristol | BS1 2NT

- Core Policy CP4 "Create safe streets, homes and workplaces: where buildings are positioned with landscaping to define and enhance streets and spaces; assist finding your way around with focal points or landmarks; provide permeability, reduce car domination of the street and reduce vehicle speeds; provide shared or social spaces on the streets (where appropriate); create safe well managed attractive public and private amenity spaces; and provide adequate external storage space for waste bins, recycling materials and bicycle storage." and;

- Core Policy CP5 "Be readily accessible by bus, bicycle and foot to shopping and employment opportunities, key services and community facilities."

4.8 Consequently, the proposed allocation would be in conflict with the policies of the NPPF and the Draft Local Plan, rendering the Local Plan unsound.

T. 0117 2441 970 hello@calibro-consultants.com www.calibro-consultants.com
Whitefriars Business Centre | 2nd Floor | Whitefriars | Lewins Mead | Bristol | BS1 2NT

5. Summary & Conclusions

5.1 This Technical Paper has been prepared in relation to policy PS41-Washwell Fields and the relevant highway and transport considerations that may affect its delivery. This report has considered a number of independent but related issues, although its findings may be summarised as follows: -

a) The proposed allocation of policy PS41-Washwell Fields has been shown to have very limited opportunity to create direct vehicular access to the existing public highway. Indeed, the analysis concludes that, by virtue of land-ownership constraints, the only potential access onto the public highway is at the site's south-eastern boundary onto Lower Washwell Lane.

b) Preliminary consideration has been given to the potential format of an access onto Lower Washwell Lane, which concludes the most appropriate form would be a priority T-junction. However, given level-changes there would be a need to cut-in to the site over a distance of around 24-metres which would require retaining walls to avoid impact to adjoining land boundaries. The creation of an access in this location would also necessitate the removal of a number of large, mature trees, potentially resulting in a change of character along the road that would need to be considered in other appraisals. The junction would also create significant conflict with the adjoining access to the property of Philden House whilst also being unable to accommodate requisite visibility splays - the consequence which would be the creation of an unsafe junction contrary to policy.

c) Consideration has also been given to the adequacy of the interconnecting part of Lower Washwell Lane to its junction onto the A46-Cheltenham Road. The analysis has identified that significant sections of the lane are restricted to one-way operation with no realistic prospect for enhancement. The one-way sections are also located between blind bends in the road which, in combination, are likely to cause conflict between opposing traffic and increase the risk of vehicles needing to reverse over potentially excessive distances where there is substandard visibility and where there may be exposure to vulnerable road users.

d) Consideration has also been given to the safety and operation of Lower Washwell Lane by refuse collection vehicles. The analyses confirm that, whilst a vehicle is physically able to traverse the lane to access the proposed allocation, any vehicle travelling in the opposite direction would be unable to pass. Consequently, there would be a further increase in the risk of vehicles needing to reverse over potentially excessive distances where there is substandard visibility and where there may be exposure to vulnerable road users.

e) The situation is made significantly worse by confirmation during site visits and discussion with local residents of the level of pedestrian movements along Lower Washwell Lane. In this regard, pedestrians – particularly younger school children who are at a greater risk of being involved in traffic accidents – have been observed to walk in the carriageway of the road. The pedestrian demand is, in part, related to the desire to access the Recreation Ground immediately south of the Lower Washwell Lane, where 4no. gated accesses are provided, each with substandard intervisibility between pedestrians emerging from the playing fields and traffic travelling along the carriageway.

f) In this regard, any intensification of Lower Washwell Lane is considered to contrast against the NPPF policy as well as those set out within the emerging Local Plan.

T. 0117 2441 970 hello@calibro-consultants.com www.calibro-consultants.com
Whitefriars Business Centre | 2nd Floor | Whitefriars | Lewins Mead | Bristol | BS1 2NT

5.2 In conclusion therefore, the proposed allocation of PS41-Washwell Fields is considered to be contrary to the objectives and policies contained within both the NPPF and emerging Local Plan, whilst there remain significant doubts over its deliverability.

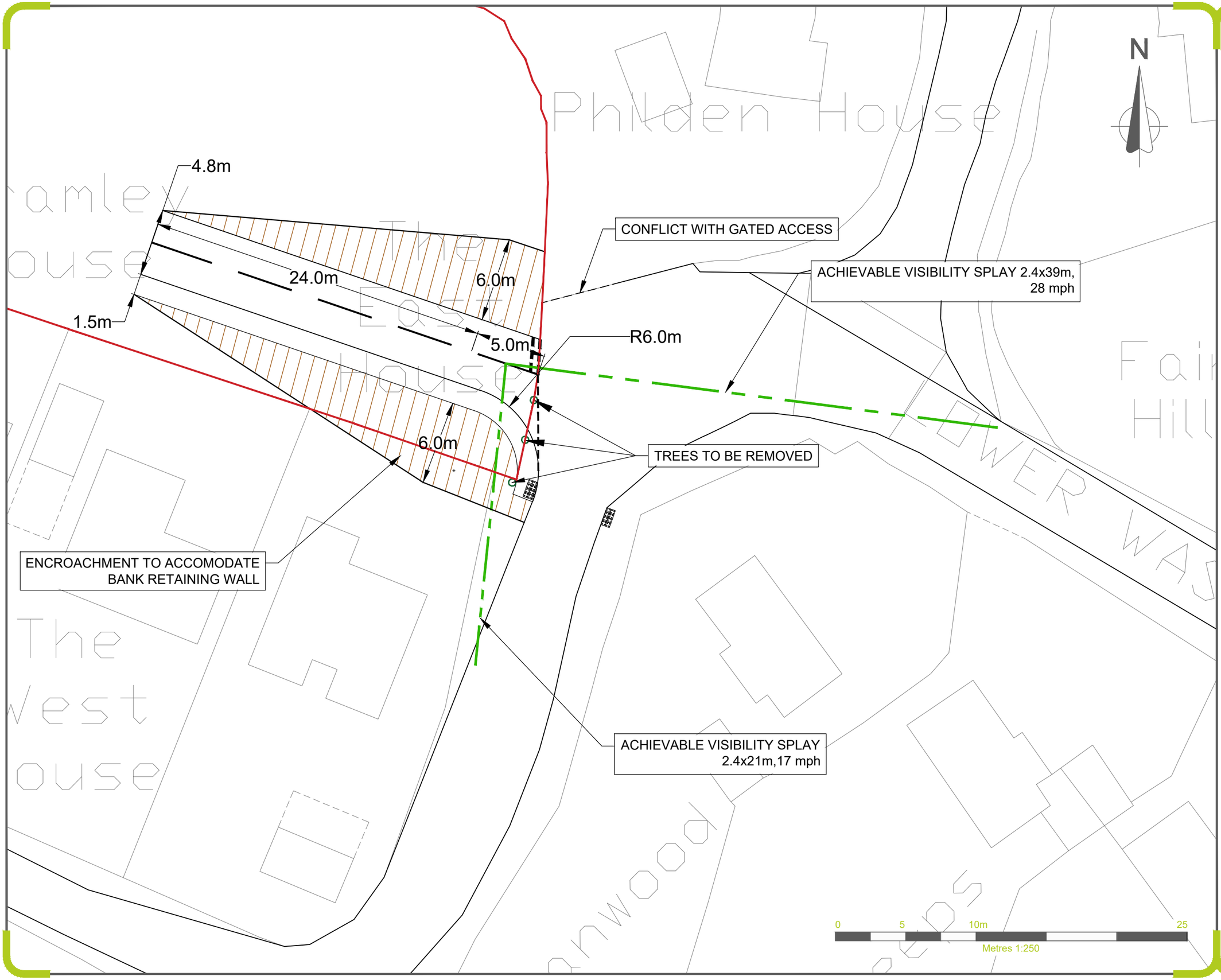
5.3 Its inclusion is therefore considered sufficient to make the Plan unsound and it is recommended that it is omitted from the Plan.

T. 0117 2441 970 hello@calibro-consultants.com www.calibro-consultants.com
Whitefriars Business Centre | 2nd Floor | Whitefriars | Lewins Mead | Bristol | BS1 2NT

Appendix A

Junction Access

T. 0117 2441 970 hello@calibro-consultants.com www.calibro-consultants.com
Whitefriars Business Centre | 2nd Floor | Whitefriars | Lewins Mead | Bristol | BS1 2NT



LOCATION PLAN

LEGEND:

- ACHIEVABLE JUNCTION VISIBILITY
- BANK
  MAXIMUM 1:3 GRADIENT
- SITE BOUNDARY
- TACTILE PAVING

REV:	DESCRIPTION:	BY:	DATE:
-	FIRST ISSUE	AF	21/01/20

STATUS: FOR INFORMATION

CLIENT: CHARTERHOUSE STRATEGIC LAND LIMITED

SITE: WASHWELL FIELDS, PAINSWICK

TITLE: POSSIBLE SITE ACCESS LOWER WASHWELL LN

SCALE AT A3:	DATE:	DRAWN:	CHECKED:
1:250	21/01/20	AF	RW

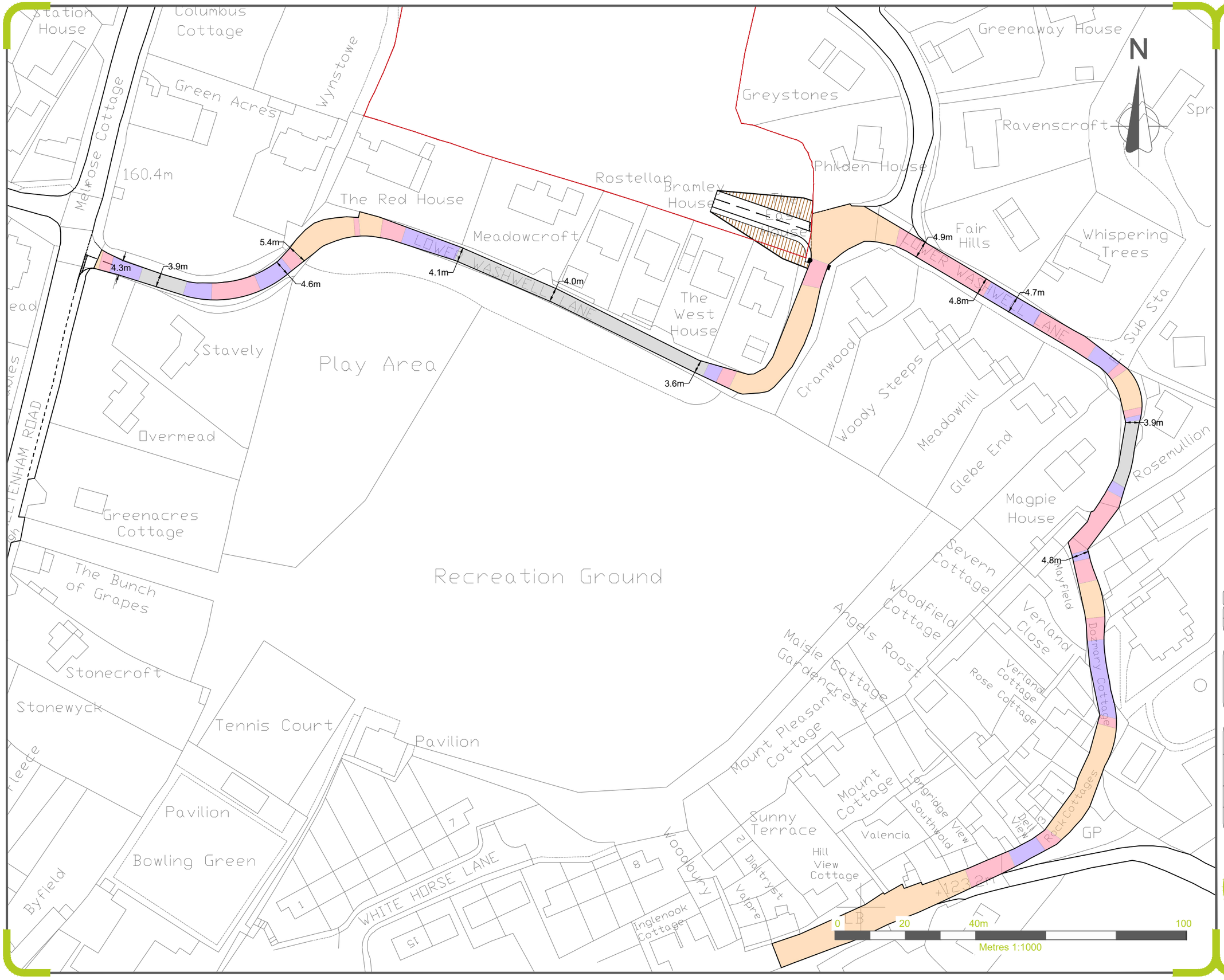
PROJECT NO:	DRAWING NO:	REVISION:
20-217-20	SK04	-

calibro
transport, highway & infrastructure consultants
t: 0117 2441 970 www.calibro-consultants.com
Whitefriers Business Centre, 2nd Floor, Whitefriars, Lewins Mead, Bristol, BS1 2NT

Appendix B

Road Geometry

T. 0117 2441 970 hello@calibro-consultants.com www.calibro-consultants.com
Whitefriars Business Centre | 2nd Floor | Whitefriars | Lewins Mead | Bristol | BS1 2NT



LOCATION PLAN

LEGEND:

- <4.1m
- 4.1m - 4.8m
- 4.8m - 5.5m
- >5.5m
- SITE BOUNDARY

REV:	DESCRIPTION:	BY:	DATE:
-	FIRST ISSUE	AF	21/01/20

STATUS: FOR INFORMATION

CLIENT: CHARTERHOUSE STRATEGIC LAND LIMITED

SITE: WASHWELL FIELDS, PAINSWICK

TITLE: CARRIAGEWAY WIDTH LOWER WASHWELL LN

SCALE AT A3:	DATE:	DRAWN:	CHECKED:
1:1000	21/01/20	AF	RW
PROJECT NO:		DRAWING NO:	REVISION:
20-217-20		SK01	-

calibro
transport, highway & infrastructure consultants
t: 0117 2441 970 www.calibro-consultants.com
Whitefriars Business Centre, 2nd Floor, Whitefriars, Lewins Mead, Bristol, BS1 2NT

Appendix C

Forward Visibility

T. 0117 2441 970 hello@calibro-consultants.com www.calibro-consultants.com
Whitefriars Business Centre | 2nd Floor | Whitefriars | Lewins Mead | Bristol | BS1 2NT

16m, 13 mph
15m, 12.5 mph
ACHIEVABLE VISIBILITY SPLAYS
2.4x12.3m TO KERBLINE, 10 mph
2.4x23.4m TO CENTRELINE, 18.5 mph
14m, 12 mph
8m, 6 mph
12m, 10 mph
7m, 5 mph
15m, 12.5 mph
LOWER WASHWELL LANE
WHITE HORSE LANE
Recreation Ground
Play Area
Pavilion
Bowling Green
Tennis Court
Station House
Columbus Cottage
Wynstowe
Green Acres
Melrose Cottage
160.4m
The Red House
Rostellan
Bramley House
Meadowcroft
The West House
Greystones
Greenaway House
Ravenscroft
Phildon House
Fair Hills
Whispering Trees
Cranwood
Woody Steeps
Meadowhill
Glebe End
Magpie House
Rosemullion
Severn Cottage
Woodfield Cottage
Angels Roost
Maisie Gardens
Mount Pleasant Cottage
Verland Close
Verland Cottage
Rose Cottage
Mayfield
Dazmary Cottage
Rock Cottages
Mount Cottage
Longridge
Southwold
View
Valencia
Sunny Terrace
Hill View Cottage
Woodbury
Digtryst
Valpre
Inglenook Cottage
Greenacres Cottage
The Bunch of Grapes
Stonecroft
Stonewyck
Byfield
Overmead
Stavely
+123.2m
GP
LB
Sub Sta
0 20 40m 100
Metres 1:1000

N

SK02

LOCATION PLAN

LEGEND:

- REQUIRED JUNCTION VISIBILITY 2.4x25m 20 mph, MfS
- ACHIEVABLE JUNCTION VISIBILITY
- REQUIRED FORWARD VISIBILITY 25m 20 mph, MfS
- ACHIEVABLE FORWARD VISIBILITY
- SITE BOUNDARY

REV:	DESCRIPTION:	BY:	DATE:
-	FIRST ISSUE	AF	21/01/20

STATUS: FOR INFORMATION

CLIENT: CHARTERHOUSE STRATEGIC LAND LIMITED

SITE: WASHWELL FIELDS, PAINSWICK

TITLE: VISIBILITY LOWER WASHWELL LN

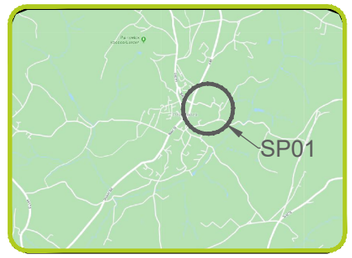
SCALE AT A3:	DATE:	DRAWN:	CHECKED:
1:1000	21/01/20	AF	RW
PROJECT NO:		DRAWING NO:	REVISION:
20-217-20		SK02	-

calibro
transport, highway & infrastructure consultants
t: 0117 2441 970 www.calibro-consultants.com
Whitefriars Business Centre, 2nd Floor, Whitefriars, Lewins Mead, Bristol, BS1 2NT

Appendix D

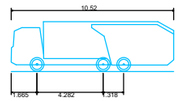
Refuse Vehicle Swept-Path Analysis

T. 0117 2441 970 hello@calibro-consultants.com www.calibro-consultants.com
Whitefriars Business Centre | 2nd Floor | Whitefriars | Lewins Mead | Bristol | BS1 2NT



LOCATION PLAN

LEGEND:



Phoenix 2-23W (with Elite 2 6x2ML chassis)

Overall Length	10.520m
Overall Width	2.530m
Overall Body Height	3.211m
Min Body Ground Clearance	0.416m
Track Width	2.530m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	10.250m

Large Car (2006)

Overall Length	5.079m
Overall Width	1.872m
Overall Body Height	1.525m
Min Body Ground Clearance	0.310m
Max Track Width	1.831m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	5.900m

REV:	DESCRIPTION:	BY:	DATE:
-	FIRST ISSUE	AF	13/01/20

STATUS: FOR INFORMATION

CLIENT: CHARTERHOUSE STRATEGIC LAND LIMITED

SITE: WASHWELL FIELDS, PAINSWICK

TITLE: SWEPT-PATH ANALYSIS LOWER WASHWELL LN

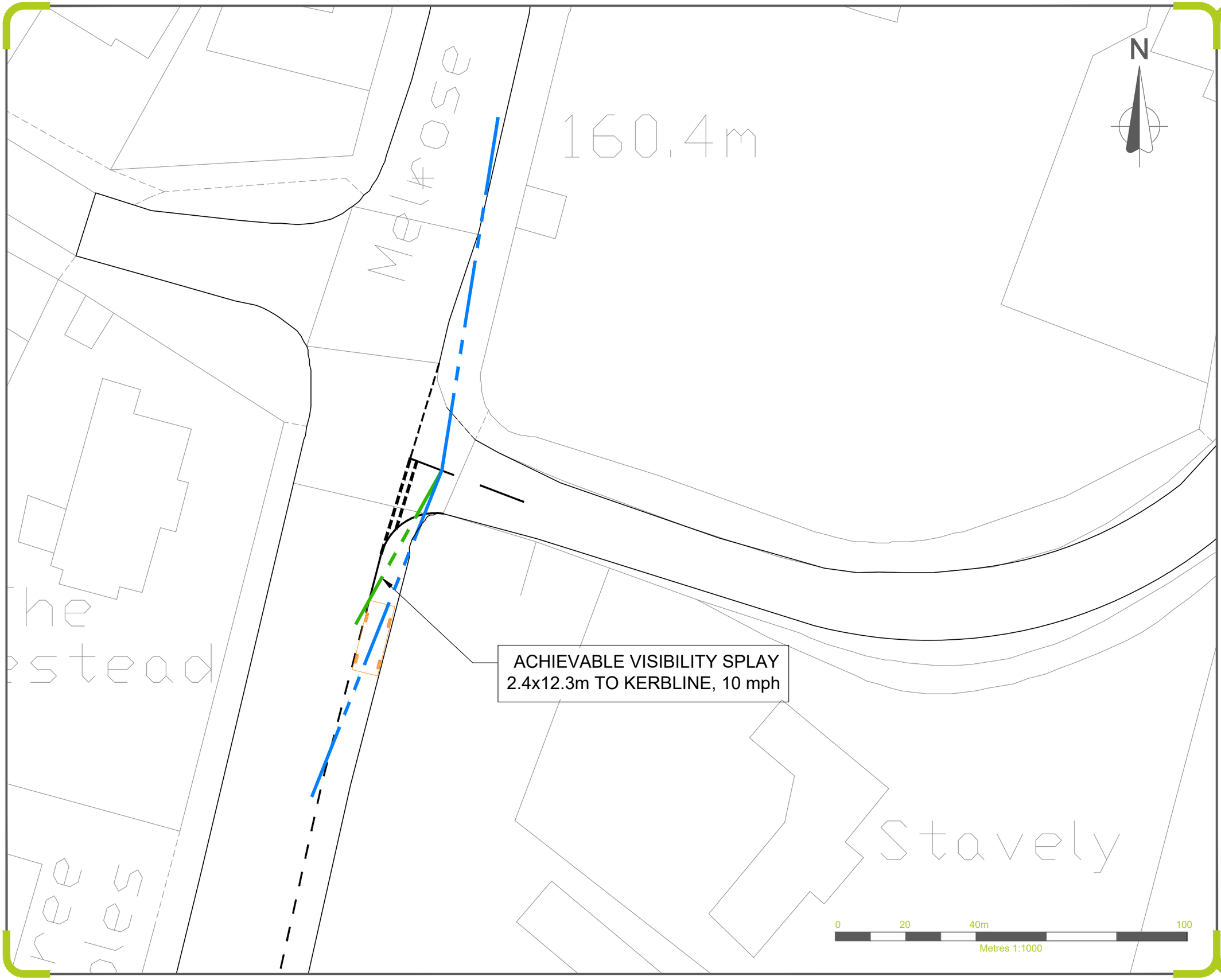
SCALE AT A3:	DATE:	DRAWN:	CHECKED:
1:750	13/01/20	AF	RW
PROJECT NO:		DRAWING NO:	REVISION:
20-217-20		SP01	-

calibro
transport, highway & infrastructure consultants
t: 0117 2441 970 www.calibro-consultants.com
Whitefriars Business Centre, 2nd Floor, Whitefriars, Lewins Mead, Bristol, BS1 2NT

Appendix E

A46-Cheltenham Road / Lower Washwell Lane Priority Junction Visiblity Assessment

T. 0117 2441 970 hello@calibro-consultants.com www.calibro-consultants.com
Whitefriars Business Centre | 2nd Floor | Whitefriars | Lewins Mead | Bristol | BS1 2NT



LOCATION PLAN

LEGEND:

REQUIRED JUNCTION VISIBILITY
2.4x25m
20 mph, MfS

ACHIEVABLE JUNCTION VISIBILITY

REV:	DESCRIPTION:	BY:	DATE:
-	FIRST ISSUE	AF	21/01/20

STATUS: FOR INFORMATION

CLIENT: CHARTERHOUSE STRATEGIC LAND LIMITED

SITE: WASHWELL FIELDS, PAINSWICK

TITLE: VISIBILITY CHELTENHAM RD

SCALE AT A3:	DATE:	DRAWN:	CHECKED:
1:1000	21/01/20	AF	RW

PROJECT NO:	DRAWING NO:	REVISION:
20-217-20	SK03	-

calibro
transport, highway & infrastructure consultants
t: 0117 2441 970 www.calibro-consultants.com
Whitefriers Business Centre, 2nd Floor, Whitefriars, Lewins Mead, Bristol, BS1 2NT