Brislington Meadows, Bristol

Road Gradient Assessment Note

Prepared by: Digital analysis of planning documents on behalf of the Save Brislington Meadows Group.

Contents

Click a heading to navigate. Right-click this section and select "Update Field" to refresh page numbers.

Executive Summary

This technical note relates to planning application 26/11597/M (Brislington Meadows, Broomhill Road, Bristol BS4 4UD), which seeks reserved matters approval pursuant to outline permission 22/01878/P for up to 260 dwellings by Keepmoat Homes/Homes England. An earlier application, 25/14849/M, was refused by Bristol City Council (BCC) Planning Committee B on 20 May 2026 on accessibility and gradient grounds. This note provides independent technical analysis of the site's road gradients and their planning policy implications.

Site topography. Brislington Meadows occupies a steeply sloping hillside. The sole vehicular access is from Broomhill Road at the top of the site; the lowest parts lie some 8–10 metres below. Engineer-certified longitudinal sections by Rappor (3066-RAP-CE-DR-C-4010 to 4012, 10 April 2026) confirm that six of the eleven roads within the proposed adoption boundary fail LTN 1/20 cycling gradient standards. The gradient data is identical to that in the refused application (25/14849/M).

Notably, BCC's Transport Development Management (TDM) assessment advised against refusal on gradient or accessibility grounds: given the site's topographical constraints, compliance with the approved Design Code and satisfaction of the Inclusive Mobility standard, TDM considered that an Inspector at appeal would be unlikely to uphold a refusal, particularly under the tilted balance favouring housing. The Officer shared this view and recommended approval. The Committee nonetheless refused the application on 20 May 2026. LTN non-compliance is therefore not disputed — BCC's own highway officers acknowledge it; the question is one of planning weight, not technical fact.

Road gradient non-compliance. BCC's TDM assessment (Appendix 3 to the Report to Committee Addendum, 8 May 2026) confirms that Roads 3, 4, 5, 8, 9 and 10 are "LTN NOT Compliant", exceeding the maximum desirable gradient lengths in LTN 1/20 Table 5-4. The most severe failures are Road 8 (5.0% (1:20) for 55.4m) and Road 10 (4.9% (1:20) for 54.5m), with Road 4 at 4.9% for 49.8m — all far beyond the 30m maximum at that gradient. Road 5 (4.4% for 48.1m) and Road 3 (3.4% for 104.7m) also fail on interpolated limits. These six roads form the primary connections within the development and are unavoidable for residents of the lower terraces.

Active Travel England. ATE, the Government's statutory active travel consultee, initially recommended deferral of 25/14849/M on 3 December 2025, citing non-compliance with NPPF paragraphs 96, 110, 115 and 117. After amended plans in February 2026 it moved to conditional support, subject to conditions on connectivity and the structural integrity of active travel routes. Those conditions did not address the gradient non-compliance confirmed by TDM, and ATE is unlikely to take a different position on this application.

25/14849/M The Officer reports. The Officer twice recommended approval of 25/14849/M (April and May 2026), arguing that compliance with the Design Code's 1:20 gradient ceiling was sufficient. But the Design Code ceiling is not equivalent to LTN 1/20 landing-stage compliance: the April 2026 report itself acknowledged that the Code "expects gradients to be steeper than [1:20] in parts" and that "it has not been possible to fully comply" with LTN 1/20. Both reports' claim of "no evidence of adverse impact" is contradicted by ATE's responses and TDM's own findings. The committee's refusal was not unreasonable on the evidence before it.

The post-consent timing argument. The Officer characterised the BCC Gradients guidance (October 2022) as a "golden standard" "introduced after the grant of consent", implying it should not apply to this reserved matters application. The chronology is wrong: outline permission was granted on 17 April 2023, when the Secretary of State's Inspector allowed the appeal (Ref APP/Z0116/W/22/3308537) against non-determination of application 22/01878/P — not in April 2022, when the application was validated. Both the Gradients guidance (October 2022) and LTN

1/20 (July 2020) were therefore already in force when consent was granted. Condition 23(e) of the appeal decision expressly reserves "cross and long sections with spot heights and gradients for the carriageways/shared surfaces" to the reserved matters stage, and neither document was considered by the Inspector, so the outline permission carries no finding of gradient compliance.

Highway adoption. Application 26/11597/M proposes adoption of all roads under the Highways Act 1980 (Section 38 plans 3066-RAP-CE-DR-C-5010 and 5011, Rappor, 9 April 2026), whereas the refused application proposed adopting Roads 1 and 3 only. The expanded proposal does not resolve the LTN 1/20 non-compliance: adoption requires TDM agreement, and TDM previously declined to adopt roads failing LTN 1/20. If TDM again declines, the position reverts to that of the refused application; if it agrees, it must depart from the same LTN assessment that underpinned the refusal.

Policy conflicts. The scheme conflicts with Core Strategy policies BCS10 and BCS21, Development Management policies DM4, DM14 and DM23, NPPF paragraphs 96, 109–117, 131, 135 and 139, LTN 1/20, DfT Inclusive Mobility guidance and the BCC Gradients guidance (October 2022) — the same conflicts identified in the 25/14849/M refusal notice of 20 May 2026.

Conclusion. This evidence, together with ATE's responses and the committee's refusal, provides a robust basis for resisting any appeal against the 20 May 2026 decision and would equally justify refusal of this application. The gradient constraints are site-wide, arising from the topography and the single vehicular access point, and the terms of the outline permission mean no revised application can resolve them. The proposal should be abandoned.

1. Introduction

This is the second application made following the grant of outline planning permission on 17 April 2023 (Appeal Ref: APP/Z0116/W/22/3308537, in respect of the non-determination of planning application 22/01878/P). An earlier application, 25/14849/M, was refused on 20 May 2026 on the basis that:

> *The proposal fails to demonstrate that the development would make adequate inclusive accessibility provision for all pedestrian users and cyclists within the curtilage of the site. Not all proposed roads meet Bristol City Council's adoptable standards and LTN 1/20 standards, many of the proposed roads (6 out of 11) have a gradient of 1/20 over 30 metres in length and do not have landing stages at the intervals recommended by LTN 1/20.*
>
> *This would be to the detriment of inclusive mobility of the area by providing excessively long stretches of steep gradient and lack of planned landing stages, preventing the development from being fully accessible particularly for wheelchair users, people with reduced mobility and cyclists.*
>
> *The proposal is therefore contrary to the NPPF, requiring inclusive accessible design for all development, in balance with well-designed places, Bristol Core Strategy Policies BCS10 and BCS21 in addition to Site Allocations and Development Management Policies DM4 DM14 and DM23. The proposal would also fail to comply with DfT's 'Inclusive Mobility' and the 'LTN 1/20' and BCC's Design Guidance Gradients - Bristol Transport Management Guidance.*

This application is made on essentially the same basis as refused application 25/14849/M and is constrained by the obligation to deliver the layout approved at outline, as shown in the illustrative masterplan (26/11597/M - ILLUSTRATIVE_LANDSCAPE_MASTERPLAN-4191828).

Brislington Meadows is a residential development site in south Bristol, situated on a sloping hillside between Broomhill Road to the east, approximately 62–63m above Ordnance Datum (AOD) and lower ground to the west (approximately 53–55m AOD). The site lies within the redline boundary as shown on the site plan (26/11597/M - SITE_PLAN-4191575).

The site has a single point of vehicular access, off Broomhill Road at the upper eastern boundary (a Bonville Road entrance serves emergency vehicles only). This is a critical constraint: every vehicle and mobility aid user entering or leaving the site must begin or end their journey at this point, at approximately 62–63m AOD. Pedestrians and cyclists will also be able to enter from School Road, Bonville Road and Fermaine Avenue, but Broomhill Road will be the main access.

This note assesses estimated road gradient conditions at the site against the requirements of *Bristol City Council Transport Development Management Guide — Section 3.2.7: Gradients* (October 2022) ('the BCC Guide'). The analysis is based on digital extraction of level data from engineering cross-sections AA, BB, CC and DD prepared by LDA Design / CampbellReith (drawing ref. 22/01878/P P-SECTION_AA-BB-CC-DD-3268948, July 2022).

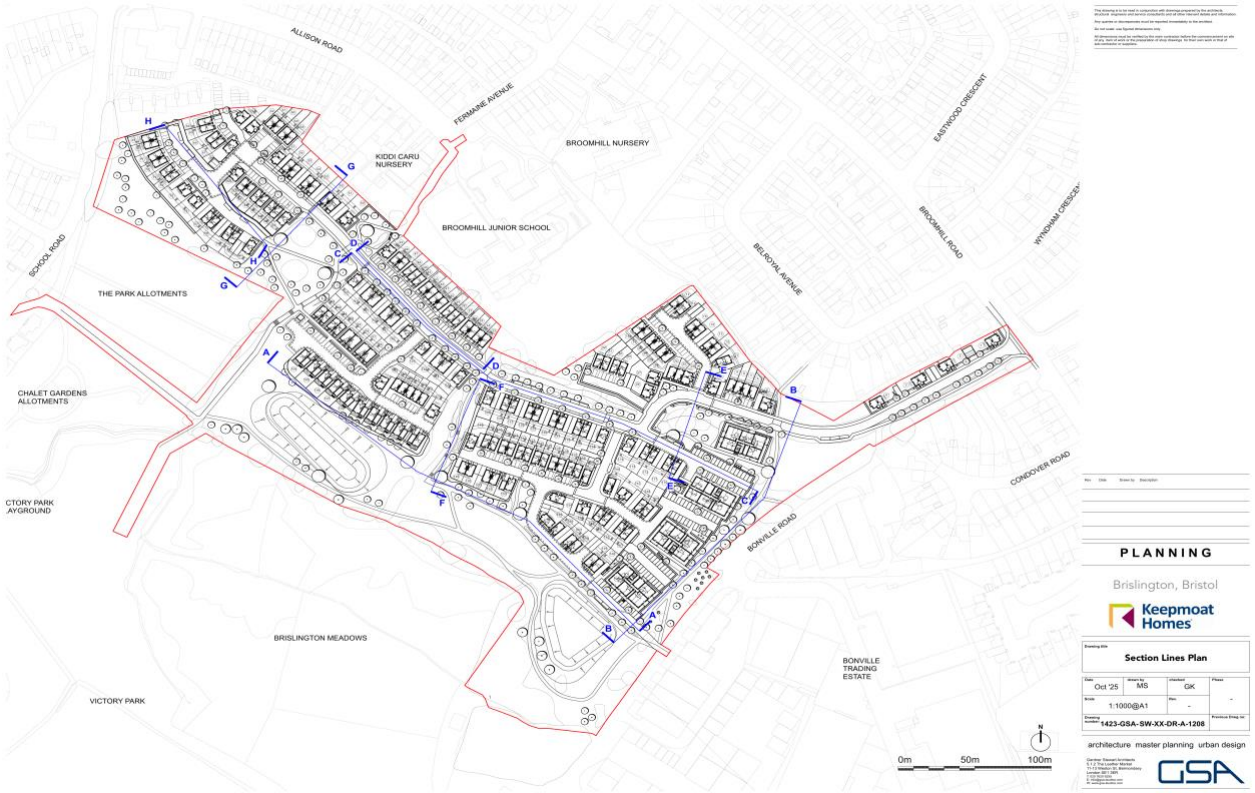

Figure 1: Section Lines Plan — Brislington Meadows (drawing 1423-GSA-SW-XX-DR-A-1208, Gardner Stewart Architects, October 2025). Section lines A–H shown in blue.

2. Methodology

This note is based on the road longitudinal section drawings submitted with application 26/11597/M (3066-RAP-CE-DR-C-4010, 4011 and 4012, Rappor, 10 April 2026). All gradient values and run lengths quoted are taken directly from the gradient annotations on those drawings; the extraction methodology is set out in Annex A.

Figure 1 reproduces the Section Lines Plan (drawing 1423-GSA-SW-XX-DR-A-1208, Gardner Stewart Architects, October 2025), showing section lines A–A to H–H, which define the cross-sections from which formation levels are derived.

The drawings are not materially different from those submitted with the refused application (25/14849/M, drawings 3066-RAP-CE-DR-C-4000/4001/4002): the gradient data is identical across all comparable roads. Road numbering has been updated and former Road 12 redesignated Road 2TH, but no substantive redesign of gradients has taken place.

The applicable cycling gradient standard is LTN 1/20 Table 5-4, as referenced in the Bristol City Council Cycling and Walking Infrastructure Plan and adopted in the BCC Gradients Guide. The standard specifies maximum desirable gradient lengths: 5% (1:20) for 30m, 3% (1:30) for 80m, 2.5% (1:40) for 100m, and 2% (1:50) for 150m, with gradients exceeding 5% not permitted. Intermediate values are interpolated.

3. Findings: Site topography and access

3.1 Access point and vertical range

The sole vehicular access is from Broomhill Road, at approximately 62–63m AOD on the upper eastern edge. The site descends westward to lower terrace levels of approximately 53–55m AOD — a vertical drop of some 8–10m. Pedestrian and cycle connections to Fermaine Avenue, School

Road and Bonville Road may be achievable, but as Active Travel England (ATE) has confirmed, none has been designed or detailed in the application, and the informal paths proposed are unsurfaced and inaccessible to cyclists, wheelchair users and mobility aid users. They will not provide an alternative to the vehicular access route.

> **Critical implication:** With a single vehicular access point at the top of the site, the steep transverse (north–south) link roads are the only route by which any vehicle-dependent user can reach the lower terraces from the public highway. Non-compliance here renders the lower terraces effectively inaccessible to wheelchair users, many mobility-impaired pedestrians and cyclists — potentially unlawful under the Equality Act 2010.

3.2 Estimated formation levels from cross-sections

Table 1 below summarises the estimated formation levels at road feature positions within each cross-section, as extracted from the engineering drawings.

Section	Road Feature	Est. Formation Level	Notes
A–A	Road 1 (west)	55.0m AOD	20m from western edge; green verge/vegetation to west
A–A	Road 2 (east)	60.5m AOD	74m from western edge; proposed dwellings with retaining walls
B–B	Road	53.2m AOD	8m from western edge; only road feature in this section
C–C	Road 1	60.5m AOD	72m from western edge; cycling/walking route to west
C–C	Road 2	63.9m AOD	129m from western edge; proposed dwellings both sides
D–D	Road 1	67.5m AOD	109m from western edge; includes Belroyal Avenue area
D–D	Road 2	66.4m AOD	147m from western edge; apartment block frontage

Table 1: Estimated Road formation levels from cross-sections A-A to D-D

3.3 Site cross-slope

Environment Agency 1m LiDAR DTM data, analysed along the alignment of section line A–A (drawing 1423-GSA-SW-XX-DR-A-1208, Gardner Stewart Architects, October 2025), records the site surface stepping from approximately 54.7m AOD at the western boundary to approximately 62.6m AOD at the eastern boundary — a rise of approximately 7.9m over a section width of 103m, equating to a cross-slope of approximately 8% (1:13) east–west. This is corroborated by spot heights on the submitted plans: Broomhill Road at approximately 62–63m AOD and the lower western site area at approximately 54–55m AOD.

3.4 Transverse link roads (north-south)

North–south roads must negotiate the slope between the Broomhill Road access point and the lower terraces — an implied level change of approximately 9m. Applied over the horizontal distances available, this produces gradients of 4.9–5.0% on the north–south link roads (Roads 4, 8

and 10).

The engineering sections note retaining walls in Sections A–A, B–B and C–C, managing level differences between terraces. Retaining walls, however, manage lateral level changes within plots; they do not reduce the longitudinal gradient of the connecting roads.

3.5 Road Longitudinal Sections and Section 38 Adoption Plans

3.5.1 Road Longitudinal Sections

Application 26/11597/M is accompanied by three longitudinal section drawings (3066-RAP-CE-DR-C-4010, 4011 and 4012, Rappor, 10 April 2026) showing the designed profiles for Roads 1, 2, 2TH, 3, 3TH, 4, 5, 6, 6TH, 7, 8, 9, 10 and 10TH. Comparison with the equivalent drawings submitted with the refused application (4000–4002, January 2026) confirms that the gradient data is materially unchanged.

Locating the roads. No plan submitted with the application labels the road numbers used on the longitudinal sections: the Section Lines Plan at Figure 1 shows only section lines A–H, and neither the Engineering Appraisal Layouts (3066-RAP-CE-DR-C-3010/3011) nor the Site Plan nor the Illustrative Landscape Masterplan carries road numbering. The roads can, however, be located from the junction markers annotated on the profiles. Road 1 runs from the Broomhill Road site access, with junctions to Roads 2 and 3. Road 3 is the primary spine, descending from the upper part of the site with junctions to Roads 3TH, 1, 4, 8 and 10. Road 4 connects Road 3 to Road 5; Road 8 connects Road 3 to Road 9; and Road 10 runs from Road 3 to its turning head (Road 10TH). The three most severely non-compliant roads (4, 8 and 10) are thus the transverse links descending from the spine, consistent with the analysis in Section 3.4. The Section 38 adoption plans (3066-RAP-CE-DR-C-5010 and 5011) should be consulted for definitive road locations. The Street Hierarchy Plan from the Design and Access Statement is reproduced at Figure 2 for orientation; the primary street (grey) corresponds to Roads 1 and 3, and the junction relationships described above can be traced on it.

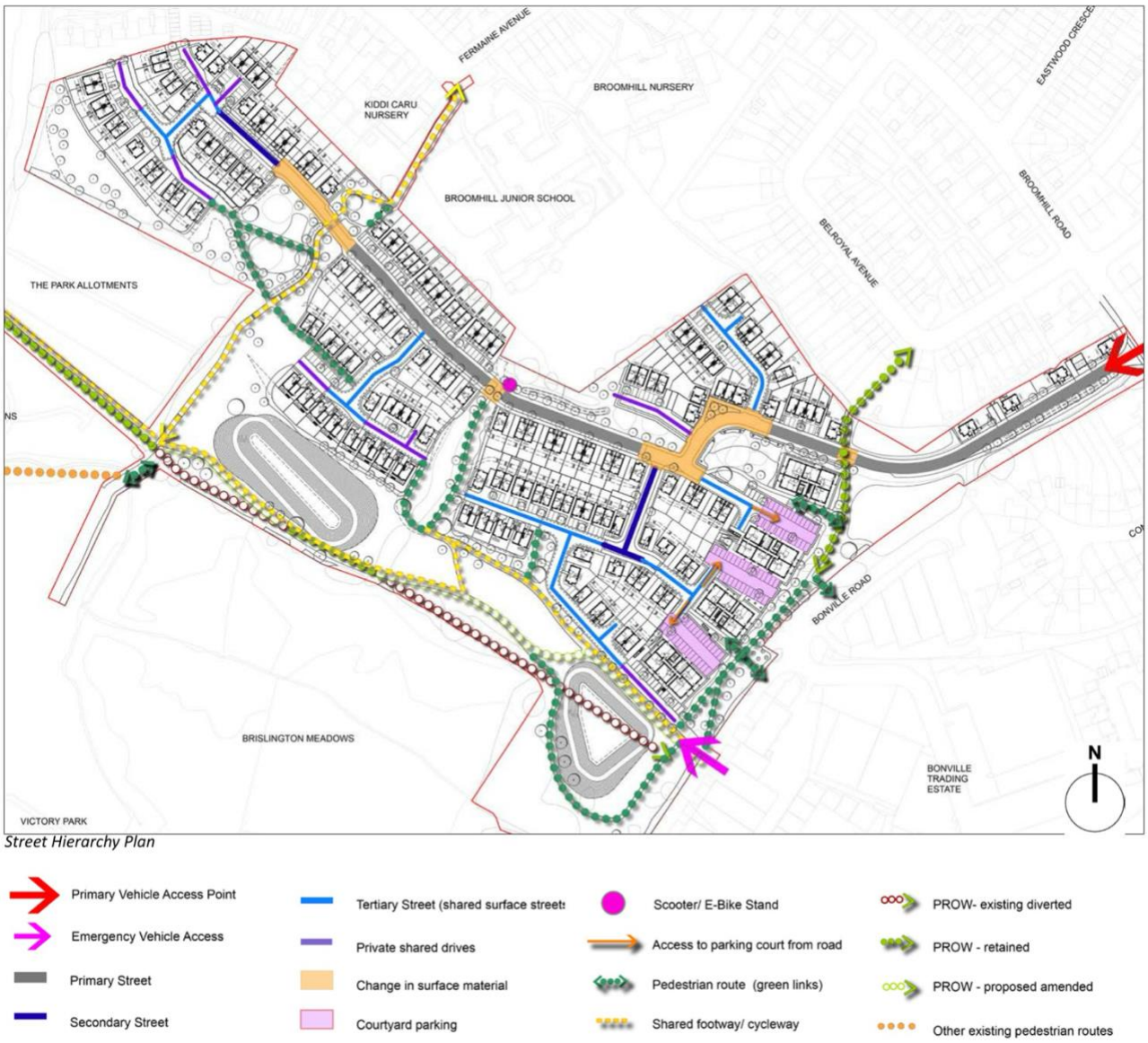

Figure 2: Street Hierarchy Plan — Brislington Meadows (Design and Access Statement, Part 2, §3.7; application 26/11597/M, document 4191902). Primary vehicle access from Broomhill Road at the upper right (red arrow); the primary street (grey) corresponds to Roads 1 and 3 of the engineering drawings, with the secondary and tertiary streets descending from it. The plan does not use the engineering drawings' road numbering.

The applicable standard is LTN 1/20 Table 5-4: the maximum desirable gradient of 5% (1:20) must not be sustained for more than 30 metres without a level rest area (landing stage), and BCC TDM will not adopt roads failing this standard. The drawings note that 'raised platform top is set 100mm above longsection levels quoted'; these are traffic-calming raised tables, not LTN 1/20 landing stages, and do not count as rest areas.

Road	Max. Designed Gradient	Length at Max. Gradient	LTN 1/20 Status
Road 1 (Sheet 1 — 3066-RAP-CE-DR-C-4010)	4.0% (1:25) also 2.6% for 88.7m	43.0m	**COMPLIANT**
Road 2 (Sheet 1)	5.0%	short run (not annotated)	**COMPLIANT**

Road	Max. Designed Gradient	Length at Max. Gradient	LTN 1/20 Status
Road 2TH (Sheet 1)	0.0% (level)	9.9m	**COMPLIANT**
Road 3 (Sheet 1)	3.4% (1:30)	104.7m	**NON-COMPLIANT — exceeds ~70m limit at 3.4%**
Road 3TH (Sheet 2)	5.0%	11.4m	**COMPLIANT (under 30m)**
Road 4 (Sheet 2 — 3066-RAP-CE-DR-C-4011)	4.9% (1:20)	49.844m	**NON-COMPLIANT — exceeds 30m limit at 5%**
Road 5 (Sheet 2)	4.4% (1:23)	48.128m	**NON-COMPLIANT — exceeds ~45m limit at 4.4%**
Road 6 (Sheet 2)	1.4% (1:69)	83.9m	**COMPLIANT**
Road 6TH (Sheet 2)	1.1%	11.4m	**COMPLIANT**
Road 7 (Sheet 2)	3.6% (1:27)	34.8m	**COMPLIANT**
Road 8 (Sheet 2)	5.0% (1:20)	55.383m	**NON-COMPLIANT — exceeds 30m limit at 5%**
Road 9 (Sheet 2)	4.9% (short run to hog curve)	not annotated	**NON-COMPLIANT per BCC TDM assessment (compliant as drawn)**
Road 10 (Sheet 3 — 3066-RAP-CE-DR-C-4012)	4.9% (1:20)	54.470m	**NON-COMPLIANT — exceeds 30m limit at 5%**
Road 10TH (Sheet 3)	4.7% (1:21)	12.201m	**COMPLIANT (under 30m)**

Table 2: Designed road gradients from longitudinal section drawings (Rappor, 10 April 2026) — LTN 1/20 assessment.

Roads 8, 10 and 4 are the critical failures: 5.0% (1:20) for 55.4m, 4.9% for 54.5m and 4.9% for 49.8m respectively, against a 30m maximum at that gradient — Road 8 running at the 5% level that LTN 1/20 does not permit to be exceeded at all. Road 5 (4.4% for 48.1m) exceeds the interpolated maximum of approximately 45m, and Road 3 — the primary spine road — at 3.4% for 104.7m greatly exceeds both the approximately 70m interpolated maximum and the BCC Gradients Guide's 80m limit at 3%. Road 9, the sixth road identified by the TDM, shows only a short 4.9% run to a hog curve as drawn.

3.5.2 Section 38 Adoption Plans

Two Section 38 adoption plans accompany the application (3066-RAP-CE-DR-C-5010 and 5011, Rappor, 9 April 2026). Section 38 of the Highways Act 1980 is the mechanism by which new roads are adopted as public highway maintainable at public expense.

A significant change from the refused application — which proposed adopting Roads 1 and 3 only — is that all roads within the development (Roads 1, 2, 2TH, 3, 3TH, 4, 5, 6, 6TH, 7, 8, 9, 10 and associated turning heads) are now proposed for adoption.

Expanding adoption to include the six non-compliant roads does not, however, resolve the LTN 1/20 non-compliance. Adoption requires TDM agreement, and TDM previously declined to adopt roads failing LTN 1/20. If TDM declines again, the scheme reverts to the position of the refused

application; if it agrees, it must depart from its own LTN 1/20 requirement. The adoption plan itself does not constitute TDM acceptance.

4. Assessment against BCC gradient policy

The BCC Guide (Section 3.2.7, October 2022) sets out gradient requirements arising from the Equality Act 2010 and the Council's public sector equality duty. Table 3 below assesses the estimated site conditions against the key BCC thresholds, incorporating the access point constraint.

Road Type / Gradient Scenario	BCC Maximum	Est. Site Gradient	Assessment
Terrace roads along contour (E–W)	5% (1:20)	< 2%	**COMPLIANT**
Pedestrian footways on terrace	5% (1:20)	< 2%	**COMPLIANT**
Manual wheelchair — terrace roads	2.5% (1:40)	< 2% (terrace)	**COMPLIANT**
N–S link road connecting terraces	5% (1:20)	4.9–5.0% (Roads 4, 8, 10)	**NON-COMPLIANT** — departure required
Access from Broomhill Road to lower terraces	5% (1:20)	4.9–5.0% (Roads 4, 8, 10)	**NON-COMPLIANT** — lower terraces inaccessible without compliant route
Cycling route N–S (LTN 1/20)	5% max 30m	4.9–5.0% (Roads 4, 8, 10)	**NON-COMPLIANT** — no compliant route to lower terraces
Crossfall (footways/shared surfaces)	2.5% (1:40)	Not confirmed	Design stage verification required
Junction approach — final 10m	2.5% (1:40)	Not confirmed	Design stage verification required

Green = likely compliant; Amber = uncertain; Red = likely non-compliant or requiring departure from standards.

Table 3: Compliance assessment against BCC Gradients Policy

4.1 The single vehicular access point as a systemic accessibility failure

The BCC Guide requires streets to be *"safe and usable for all members of the public"*, holding the bar of *"reasonably practicable"* at a high level in accordance with the Equality Act 2010. It specifically notes that *"excessively steep gradients can render public spaces unusable, therefore preventing many sections of the community from being able to use them."*

This concern is compounded by the single-access constraint. The BCC Guide contemplates separately aligned pedestrian/cycle routes and stepped shortcuts, but these mitigations presuppose alternative routes at gentler gradients. Where the only vehicular access is at the top of a steep slope and the non-vehicular alternatives remain undesigned, unsurfaced and inaccessible, there is no lower-level entry point from which gentler routes could originate. A switchback pedestrian route within the site would need careful assessment against the requirement that pedestrian routes be “direct and convenient.” Notably, the Design and Access Statement concedes that “in certain areas, gradients may exceed 1:20, reflecting existing

landform constraints, but there will be an alternative accessible route available" (Part 2, §3.7); no such alternative accessible route is, however, designed or evidenced anywhere in the application.

> In practice, wheelchair users and many mobility-impaired pedestrians could not negotiate the 4.9–5.0% link road gradients, and no realistic road length within the site could achieve the 9m descent at 5% or less. The lower terrace dwellings could not be reached independently by a significant proportion of future residents and visitors, in potential breach of the Equality Act 2010.

4.2 Pedestrian and wheelchair accessibility

The BCC Guide requires footways and shared surfaces to be no steeper than **5% (1:20)** longitudinally, with gradients above **2.5% (1:40)** potentially impassable for some manual wheelchair users. To descend 9m from Broomhill Road to the lowest terrace at a maximum 5% gradient requires a minimum horizontal distance of **180m**. At 2.5%, the distance required rises to **360m**. Whether the site layout can accommodate a dedicated pedestrian route of this length is not confirmed from the available drawings and warrants urgent investigation.

4.3 Cycling

Local Transport Note (LTN) 1/20, as referenced in the BCC Guide, sets maximum desirable lengths for cycling gradients. Table 4 below applies these to the site context.

Gradient	Max. Desirable Length (LTN 1/20)	Applicability at Brislington Meadows
2% (1:50)	150m	Achievable on terrace roads following contours
2.5% (1:40)	100m	Achievable on gently graded terrace roads
3% (1:33)	80m	Potentially achievable with careful layout
5% (1:20)	30m	Roads 4, 8 and 10 at 4.9–5.0% for 50–55m — **non-compliant** (exceeds 30m maximum length)
> 5%	Not permitted	Not applicable to designed road profiles in application 26/11597/M — all designed roads are ≤ 5%

Table 4: LTN 1/20 cycling gradient standards and applicability

BCC's TDM assessment (Appendix 3 to the Report to Committee Addendum, 8 May 2026) identifies six roads (3, 4, 5, 8, 9 and 10) as non-compliant with LTN 1/20. Drawing analysis confirms Roads 3, 4, 5, 8 and 10 from the stated gradient annotations. Road 9 as drawn shows only a short 4.9% run to a hog curve, which would not itself exceed LTN limits; its non-compliant status rests on the TDM assessment.

4.4 Waste collection

The BCC Guide requires bin stores and collection points on gradients no steeper than 1:20 (5%), so that refuse collectors can handle bins safely. Given the 4.9–5.0% link roads, bin store positioning for lower-terrace dwellings needs careful consideration; dedicated level collection points near the Broomhill Road access would likely be required, increasing the distance residents must move bins.

5. Departure from standards

The BCC Guide acknowledges that *"given Bristol's topography, it is recognised that there may be occasions when accessible gradients cannot be achieved across the whole of the site."* In such

cases, flexibility may be applied on a site-by-site basis, but the following must be demonstrated to the satisfaction of the Highway Authority:

- All reasonable steps have been taken to minimise discrimination against disabled and elderly people and those accompanied by children.
- The risks to public safety have been adequately assessed and minimised.
- Appropriate mitigation works have been provided, including passive vehicular protection (subject to appearance and accessibility); consideration of water run-off and flooding impacts.

The single-access constraint makes a departure case significantly harder than on a site with multiple access points, where lower terraces could be served from a separate lower-level access at an acceptable gradient. No such alternative exists here, and the non-vehicular connections remain undesigned and unsurfaced. A departure submission would need to demonstrate that no compliant solution is genuinely feasible and quantify the residual accessibility impact on protected groups.

> **Critical implication:** A key test for the departure application will be whether a compliant dedicated pedestrian/wheelchair route (at ≤5%, or ≤2.5% for manual wheelchair access) can be accommodated within the site, even if the carriageway itself cannot meet the standard. If the site area is sufficient to route a 180–360m switchback path from the Broomhill Road access point to the lowest terrace level, this may constitute adequate mitigation. If it is not, the departure from standards case is substantially weakened.

6. Summary

The key conclusions of this section are:

- The only vehicular access to the site is from Broomhill Road at approximately 62–63m AOD. The lowest parts of the development sit at approximately 53–55m AOD, approximately 9m below the access point.
- The site cross-slope is approximately 8% east–west. North–south link roads are confirmed by engineer-certified longitudinal sections at up to 5.0% (1:20) for 50–55m (Roads 4, 8 and 10) — at or just under the 5% ceiling and far exceeding LTN 1/20's 30m maximum length at that gradient.
- Because there is only one vehicular access point, the steep link roads are not an internal circulation inconvenience but the only vehicular route between the public highway and the lower terraces. Non-compliance here renders the lower terraces effectively inaccessible to wheelchair users, many mobility-impaired pedestrians, and cyclists, with potential implications under the Equality Act 2010.
- Terrace roads designed to follow contours are likely to achieve BCC-compliant gradients of less than 2–3% and are not a concern in themselves.
- A formal departure from standards application to Bristol City Council will be required. Its strength depends critically on whether a compliant dedicated pedestrian/wheelchair route (180m at 5%, or 360m at 2.5%, to descend 9m) can be accommodated within the site — unlikely, given the obligation to follow the approved outline masterplan.
- Crossfall, junction approach gradients, and the positioning of bin stores for lower-terrace dwellings all require verification at detailed design stage.

7. Active Travel England statutory consultation response

7.1 Overview

Active Travel England (ATE) is the Government's statutory body responsible for active travel and a statutory consultee on planning applications with potential to affect walking, wheeling and cycling infrastructure. ATE issued a formal consultation response on application 25/14849/M (Reserved Matters) on 3 December 2025 (Reference ATE/25/01722/RM). ATE's recommendation was Deferral, citing non-compliance with NPPF paragraphs 96, 110, 115 and 117.

ATE's concerns complement the gradient findings in this note: beyond the internal street network's failure to meet accessibility and cycling standards, the site lacks adequate external active travel connectivity, and the internal paths are proposed in materials wholly inadequate for their intended users.

7.2 Missing connections to WoEMCA strategic active travel routes

ATE noted that the masterplan appears to have been prepared in isolation from the West of England Mayoral Combined Authority's (WoEMCA) strategic walking, wheeling and cycling investment proposals for School Road, Victory Park and Bonville Road, all of which adjoin or could connect to the site. No formal connections to the WoEMCA network are shown in the application.

This compounds the gradient failures identified in Sections 3–5: residents of the lower terraces, already without a gradient-compliant route to the single vehicular entry point, are also denied direct active travel connections to the surrounding network.

7.3 Fermaine Avenue link

ATE identified the pedestrian and cycle link to Fermaine Avenue, north of the site, as crucial for access to primary schools, a nursery, local shops and public transport, yet found that no design detail for it had been provided in the application.

A properly designed and surfaced northern connection could provide an accessible alternative route for residents in the northern part of the site who cannot reach Broomhill Road by a gradient-compliant route; without it, residents depend entirely on the steep internal street network.

7.4 Inadequacy of proposed path surfacing

The application proposes mown grass paths for pedestrian and cycle routes within the site. ATE stated these "can in no way be argued to be accessible, inclusive or fit for purpose": they are inaccessible to cyclists, mobility scooter users and pushchair users, deteriorate rapidly, and are unusable in wet or cold weather.

ATE added that loose or self-binding gravel is also inadequate — only sealed, tarmac-bound surfacing is accessible and fit for purpose — and said it would support approval subject to revised drawings incorporating the missed connections and a condition securing sealed surfacing on all walking, wheeling and cycling routes.

These surfacing failures amplify the gradient concerns: even where gradient-compliant routes exist (primarily the east–west terrace roads), their value as accessible routes is undermined if the connecting paths between terraces and to the external network are inadequately surfaced.

The Amendment Sheet of 19 May 2026 recorded that "no concerns have been raised regarding accessibility from Highways with regard to the proposed public footpath surfacing," adding that "if required minor amendments can be sought to consider improvements via Officer delegation." This confirms that Highways did not adopt the statutory consultee's surfacing concerns, and it mischaracterises ATE's objection: ATE identified a categorical inadequacy — grass and loose gravel are unsuitable for wheelchair users and cyclists regardless of gradient — not a minor technical shortfall resolvable by Officer delegation after approval.

7.5 NPPF policy basis

ATE's formal response cites four NPPF paragraphs as the basis for its Deferral recommendation:

- Paragraph 96 (Healthy, Inclusive and Safe Places): planning policies and decisions should aim to achieve places that are safe and accessible, enabling and supporting healthy lifestyles, and are designed to promote healthy communities.
- Paragraph 110 (Promoting Sustainable Transport): within settlements, planning policies should ensure developments that generate significant movement are supported by the necessary infrastructure for sustainable transport modes, and in turn reflect current and future needs for sustainable transport.
- Paragraph 115 (Sustainable Transport): development should give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas.
- Paragraph 117 (Safe and Suitable Access): all developments that generate significant amounts of movement should be required to provide a Travel Plan; and the application should demonstrate that appropriate opportunities to promote sustainable transport modes have been taken.

These paragraphs reinforce the policy analysis in Section 10 of this note: the scheme's failure to provide safe, accessible active travel routes is not merely technical non-compliance with gradient standards but a substantive failure to achieve the sustainable transport outcomes the NPPF requires.

7.6 Revised ATE position following February 2026 amendments

Following amended plans in February 2026, ATE moved from Deferral to conditional support, stating it "would support the approval of this application" subject to: (a) revised drawings incorporating the missed connections (with a Fermaine Avenue design provided 'for information purposes' if that route is delivered under a separate process); and (b) a condition ensuring the structural integrity of all routes promoted as suitable for walking, wheeling or cycling.

The February 2026 amendments added a pedestrian link to School Road and a 4 metre (3m at its narrowest) surfaced shared cycleway to Fermaine Avenue, evidently sufficient to address ATE's immediate connectivity objections. Section 7.3 above should be read accordingly: a Fermaine Avenue link is now shown, though no gradient information for the route has been confirmed and it remains subject to ATE's condition (a).

ATE's revised position does not resolve the gradient concerns that are the subject of this note. Its continuing conditions confirm that concerns about infrastructure quality persisted, and neither ATE response addressed the internal street gradients, which are unchanged by the February 2026 amendments.

8. Assessment of the Officer's reports to planning committee (April and May 2026)

8.1 Background

The Planning Officer (the Officer) prepared two reports recommending approval of 25/14849/M: the first (23 March 2026) for the committee meeting of 1 April 2026, at which the committee voted to refuse, partly on accessibility and topography grounds, the final decision being deferred under standing orders so that reasons for refusal could be settled; and a second (addendum) report, incorporating a technical note from the Transport Development Management (TDM) team dated 8 May 2026, was prepared for the committee meeting of 20 May 2026 recommending approval.

Despite this, the committee refused the application.

The accessibility arguments in the two reports are materially consistent — Design Code compliance treated as determinative, and the claim that “no policy sets numeric gradient limits” — so this section addresses both together, noting where the April 2026 report adds relevant material.

8.2 The Design Code as determinative standard

The Officer's central argument on accessibility is that the approved Design Code (Condition 39 of outline permission 22/01878/P, granted on appeal 17 April 2023) is the appropriate 'yardstick' for assessment, and that because the proposed roads are no steeper than 1:20 (5%) they comply with the Design Code's maximum gradient requirement. On this basis, the Officer concluded that the scheme is also compliant with the Inclusive Mobility guidance.

This conflates two distinct requirements. The Design Code set a ceiling on gradient; it said nothing about landing-stage intervals, which are a separate and additional requirement of LTN 1/20 and Inclusive Mobility that could not have been addressed at outline stage.

The TDM assessment itself confirms that Roads 3, 4, 5, 8, 9 and 10 are “LTN NOT Compliant.” LTN 1/20 is DfT guidance setting the current national standard for cycle infrastructure design; compliance with the Design Code’s headline ceiling does not amount to compliance with it.

The April 2026 report’s own acknowledgement that the Design Code “expects gradients to be steeper than [1:20] in parts” undermines the argument doubly: the Code neither addresses landing-stage requirements nor, on the Officer’s own account, operates as a firm 1:20 ceiling throughout the development.

8.3 The inclusive mobility compliance claim

The Officer asserts that all proposed roads comply with DfT Inclusive Mobility, and the TDM table records “IM Compliant” for every road. But Inclusive Mobility states that gradients should “ideally” be no steeper than 1:20 (5%), with steeper slopes used only “over short distances and with mitigation, for example, level rest areas.” Roads 4, 8 and 10 run at 4.9–5.0% (1:20) for 50–55 metres without any intermediate rest areas.

Whether that is a “short distance” is the operative question. The DfT document does not define the term, but LTN 1/20’s 30-metre threshold at 1:20 is the most directly applicable benchmark, and runs 66–85% longer cannot credibly be treated as short. The TDM assessment treats the 1:20 ceiling as the only Inclusive Mobility test, ignoring the requirement for rest areas on sustained slopes.

8.4 The claim that no policy sets numeric gradient limits

The BCC TDM assessment prominently states: "NB — No policy sets numeric gradient limits." This claim is misleading in two respects:

1. BCC’s own Gradients guidance (October 2022) sets explicit numeric thresholds: a maximum of 5% (1:20) for highway adoption and 2.5% (1:40) for manual wheelchair access. Treating non-statutory guidance as equivalent to no guidance is not the correct planning approach: adopted supplementary guidance and published technical standards are material planning considerations.
2. LTN 1/20 contains a table of maximum desirable gradient lengths — a directly applicable set of numeric limits — which the TDM itself used to identify six non-compliant roads. Asserting that no policy sets numeric gradient limits while applying LTN 1/20 road by road is internally inconsistent.

8.5 The post-consent timing argument

The Officer characterised the BCC Gradients guidance (October 2022) as a "golden standard" "introduced after the grant of consent", compliance with which would be "over and above statutory requirements" and "would likely not be upheld by an independent decision maker" — implying the guidance should not apply to this reserved matters application. This is incorrect for two reasons.

First, the chronology is mistaken. April 2022 is when application 22/01878/P was received and validated; outline permission was granted on 17 April 2023, when the Secretary of State's Inspector allowed Homes England's appeal against the Council's non-determination (Appeal Ref APP/Z0116/W/22/3308537). By that date the Gradients guidance (October 2022) had been in force for some six months and LTN 1/20 (July 2020) for almost three years. Neither was "introduced after the grant of consent"; both substantially predate it.

Second, reserved matters applications are assessed against the policies and guidance in force at the time of determination, not at the time of outline grant. The Gradients guidance is a material consideration applying to proposals now being determined, and the underlying accessibility requirements — the Equality Act 2010, DfT Inclusive Mobility, LTN 1/20 — predate both the outline consent and the reserved matters applications.

C G Fry & Son Ltd v Secretary of State for Housing, Communities and Local Government [2024] UKSC 39, cited in the April 2026 report on flood risk for the proposition that permission rights "cannot be overridden or diluted by subsequent government policy or guidance", does not assist the Officer — its reasoning points the other way. The Supreme Court held that an authority's power to withhold reserved matters approval "is restricted to what has been expressed to be so reserved" and cannot be used to revisit points of principle settled by the permission. Gradient design was not settled at outline: Condition 23(e) of the appeal decision (page 41) expressly reserves "cross and long sections with spot heights and gradients for the carriageways/shared surfaces" to the reserved matters stage. Assessing that reserved matter against the Gradients guidance and LTN 1/20 now is precisely what the permission contemplates.

Notably, neither the Gradients guidance, LTN 1/20, Inclusive Mobility nor the Equality Act 2010 was considered by the Inspector, although all were in force at the time of the inquiry (31 January to 9 March 2023) and decision. The decision's only discussion of accessibility (paragraphs 111–113 and 132) concerns access to local services, the right of way network and new pedestrian/cycle links — not internal carriageway gradients. The outline permission therefore contains no finding, express or implied, that the road network complies with any of these standards.

8.6 The absence of evidence of adverse impact on different groups

Both reports assert that "there is no indication or evidence (including from consultation) that different groups would be significantly adversely impacted." Maintaining this position after the committee had deferred on accessibility grounds, and after TDM's own road-by-road assessment confirmed six of eleven roads as "LTN NOT Compliant", makes it harder, not easier, to defend.

The assertion is contradicted by ATE's formal responses (Section 7 above): an initial Deferral recommendation citing NPPF paragraphs 96, 110, 115 and 117, followed by conditional support whose conditions — on connectivity and structural integrity — did not address the internal gradient non-compliance at all.

The April 2026 report's own admission that "it has not been possible to fully comply" with LTN 1/20, describing the outcome as "a compromise between reducing gradients and achieving design standards", directly contradicts the "no evidence of adverse impact" claim. The technical findings

in this note independently corroborate the adverse impact on cyclists, wheelchair users and mobility-impaired pedestrians.

8.7 The highway adoption argument

For the refused application, BCC agreed to adopt only Roads 1 and 3, the main spine roads; the remaining nine roads, including all six LTN non-compliant ones, were to stay private. Application 26/11597/M now proposes adoption of all roads (Section 38 plans 3066-RAP-CE-DR-C-5010 and 5011). As set out in Section 3.5.2, this does not resolve the non-compliance: TDM must either decline adoption — restoring the refused position — or depart from the same LTN assessment that formed the factual basis of the refusal.

Non-adoption leaves the maintenance standard of these streets unguaranteed by the Highway Authority. For a development of 260 dwellings — including DM4 wheelchair-accessible units — dependent on a private street network for all journeys, with no mechanism to compel a management company to maintain accessibility standards, that is a material long-term risk.

8.8 The tilted balance

Both the Officer's report and the TDM note invoke the tilted balance in favour of housing provision, suggesting that accessibility concerns would be outweighed at appeal.

Under NPPF paragraph 11(d), where no five-year housing land supply can be shown, permission should be granted unless adverse impacts would "significantly and demonstrably outweigh the benefits." The failures here are not minor or technical: a scheme whose lower terraces are inaccessible to wheelchair users, where six roads fail national cycling standards and a statutory consultee formally objected, is capable of significantly and demonstrably outweighing the benefit of 260 dwellings — particularly given alternative sites that could deliver housing without such failures.

Nor does the tilted balance diminish the requirement to comply with development plan policies on accessibility and inclusive design. BCS10, BCS21, DM4, DM14 and DM23 implement specific NPPF objectives; conflict with them cannot be dissolved into a generic balance against housing numbers.

8.9 Summary assessment of the Officer's reports

For the reasons set out above, the Officer's recommendation to approve the application on accessibility grounds rests on six principal weaknesses:

1. The Design Code compliance argument conflates the 1:20 gradient ceiling with full compliance with LTN 1/20 landing stage requirements — two distinct tests. The BCC TDM assessment confirms six roads fail the latter.
2. The Inclusive Mobility compliance claim for roads at 1:20 over 50–55 metres is questionable: Inclusive Mobility requires mitigation (level rest areas) on sustained slopes, which are not provided.
3. The assertion that "no indication or evidence from consultation" exists of adverse impact contradicts Active Travel England's formal Deferral recommendation — a statutory consultee response that is not addressed anywhere in the Officer's report.
4. The invocation of the tilted balance overstates its effect: it does not extinguish the requirement to comply with development plan policies on accessibility, nor does it reduce the threshold for "significantly and demonstrably" adverse impacts where those impacts fall on disabled and mobility-impaired residents.
5. The April 2026 report's admission that full LTN 1/20 compliance "has not been possible",

describing the result as "a compromise", directly contradicts the assertion in both reports that there is no evidence of adverse impact on different groups.

6. The post-consent timing argument rests on an incorrect chronology: outline permission was granted on 17 April 2023, on appeal, by which date the Gradients guidance (October 2022) and LTN 1/20 (July 2020) were already in force, and Condition 23(e) expressly reserves gradient sections to the reserved matters stage. Neither instrument was considered by the Inspector in the appeal.

The committee's decision to refuse on 20 May 2026, against the Officer's recommendation at both appearances, reflects these weaknesses. The technical evidence in this note, together with ATE's statutory responses, provides a robust factual and policy basis supporting its determination.

9. Highway adoption: legal framework and long-term implications

9.1 Introduction

A technical note on highway adoption (TN01, John Russell Transport Planning, June 2026) examines the legal and practical consequences of designing streets that will not qualify for adoption as Highway Maintainable at Public Expense under Section 38 of the Highways Act 1980. TN01 concludes that insufficient information has been provided to demonstrate that the non-adopted streets would offer a safe, sustainable and equitable long-term solution, with significant uncertainty over maintenance responsibilities, liability exposure and the implications of publicly accessible highways built below the highway authority's minimum adoptable standards.

TN01's findings bear directly on this note: the roads remain unadopted because they fail the highway authority's minimum design requirements, including gradient standards. The gradient deficiencies identified in Sections 3–5 are therefore the root cause of the non-adoption problem TN01 analyses.

9.2 The legal status of non-adopted public streets

Non-adopted status does not remove the Highway Authority's statutory responsibilities. Under Section 1(2) of the Highways Act 1980 the Council is highway authority for all highways in its area "whether or not maintainable at the public expense", and Section 122 of the Road Traffic Regulation Act 1984 requires it to secure "the expeditious, convenient and safe movement of vehicular and other traffic (including pedestrians)" — a duty extending to all lawful users, not only motor vehicles.

Crucially, the streets proposed for non-adoption will not be gated or restricted: they will function in practice as public streets despite their private maintenance status — fundamentally unlike gated communities. The Highway Authority should therefore satisfy itself as to the legal, operational and liability implications of streets that function as public highways but are deliberately designed below its minimum adoptable standards.

9.3 Design standards and the purpose of the TDMG

The Transport Development Management Guide (TDMG) exists to ensure that developments provide safe, accessible and sustainable transport infrastructure throughout their lifetime. It promotes context-sensitive design and allows flexibility, but establishes minimum standards considered necessary for streets to operate safely and effectively for all users over the long term.

That certain roads fail the minimum standards required for adoption is, as TN01 states, "a matter of significant concern." Non-adoption does not remove the physical consequences of substandard design: a road unsuitable for adoption due to deficient geometry, accessibility or operational

safety "remains subject to those deficiencies regardless of its maintenance status."

The Design Code, as TN01 notes, is a useful planning tool but "remains fundamentally a planning document and does not supersede the separate legal and technical requirements" governing public highways. The Officer's reliance on it as the determinative standard (Section 8.2 above) fails to grapple with this point.

9.4 Equality Act 2010 obligations

TN01 identifies a legal obligation not adequately addressed in the submission or the Officer's report: the Equality Act 2010 requires public authorities to have 'due regard' to the needs of persons with protected characteristics, including disabilities. It would not be lawful or reasonable to assume that future occupiers will not include elderly, disabled or mobility-impaired people, or families with young children.

Nor can planning conditions predict changes in residents' circumstances: occupiers who are fully mobile at purchase may later develop temporary or permanent mobility impairments. The street network must therefore safely accommodate all lawful users throughout the development's lifetime, not only at first occupation.

This bears directly on the DM4 wheelchair accessible housing requirement (Section 10.4 below): wheelchair-accessible dwellings served by streets that fail accessibility standards, including gradient standards, are not meaningfully accessible in practice.

9.5 Maintenance, liability and financial implications for residents

TN01 identifies a significant gap in the application: no mechanism explains how long-term maintenance, management and liability will be discharged in perpetuity. At reserved matters stage sufficient detail should be available for a proper assessment; the absence of a clear, enforceable management strategy is a significant deficiency.

Where a management company is established, all costs of maintenance, resurfacing, drainage repairs, lighting and liability claims will ultimately be borne by residents, directly or through estate charges — residents funding infrastructure the Highway Authority declined to adopt as substandard. The financial implications could be substantial and remain unquantified.

Waste collection, deliveries, utilities, maintenance contractors and potentially emergency services must also operate on these streets. The absence of objections now is no commitment to serve substandard roads indefinitely: operational policies change, and any reduction in service would place residents at a significant disadvantage compared with occupiers served by adoptable highways.

9.6 The two-tier development risk

TN01 concludes the proposal risks creating "a two-tier development in which certain residents are exposed to greater financial liabilities and potentially reduced service provision as a direct consequence of living on streets that fail to meet adoptable standards." The concern is especially acute for affordable and social housing occupiers, who may have limited ability to move or to influence management arrangements; how liabilities would be distributed across the development is unclear.

The steepest non-compliant roads serve the lower terraces — furthest from the access point and most dependent on the internal network. If those streets also carry the highest maintenance liabilities and the greatest risk of service withdrawal, their residents face a compounded disadvantage: inaccessible streets and unguaranteed maintenance.

9.7 Summary

The issues identified in TN01 strengthen and extend the gradient assessment findings in three material respects:

1. They demonstrate that the non-adoption of the gradient non-compliant roads is not a technicality but a consequence of a fundamental failure to design streets that meet the minimum standards the Highway Authority considers necessary for safe public use.
2. They establish that non-adopted status does not insulate the scheme from the Equality Act 2010 or the statutory highway duties of the Highway Authority.
3. They reveal an information gap in the application that should have been addressed before the reserved matters application was determined: the absence of any credible long-term management, maintenance and liability framework for streets that will function as public highways.

These matters were not addressed in the Officer's report. Gradient non-compliance, non-adoption, unresolved maintenance liability and Equality Act obligations together represent a material planning concern not captured by treating Design Code compliance as decisive.

10. Assessment against the development plan and national planning policy

10.1 Introduction

This section assesses the gradient findings against the statutory development plan for Bristol and the NPPF (December 2024). The refusal of 25/14849/M on 20 May 2026 cited the same policy framework, confirming that the gradient failings identified in this note breach multiple adopted policies.

10.2 National Planning Policy Framework (NPPF, December 2024)

Healthy, inclusive and safe places (paragraph 96)

NPPF paragraph 96 requires planning policies and decisions to achieve healthy, inclusive and safe places. In particular it requires (a) street layouts that allow for easy pedestrian and cycle connections within and between neighbourhoods; (b) well-designed, clear and legible pedestrian and cycle routes and high-quality public space that encourage the active and continual use of public areas; and (c) layouts that encourage walking and cycling.

The confirmed gradients (Roads 4, 8 and 10 at 4.9–5.0% for 50–55m; Road 3 at 3.4% for 104.7m) mean the layout cannot deliver the easy pedestrian and cycle connections paragraph 96 requires; the topographic constraint means a fully accessible, LTN-compliant layout would require a fundamentally different development concept.

Promoting sustainable transport (paragraphs 109 and 116)

Paragraph 109 requires transport considerations to be addressed from the earliest stages of design, using 'a vision-led approach to identify transport solutions that deliver well-designed, sustainable and popular places.' Paragraph 116 requires plans to provide 'attractive and well-designed walking and cycling networks with supporting facilities.'

The 4.9–5.0% north–south link roads are incompatible with LTN 1/20's limits, reflecting a failure to integrate transport constraints into the design from the outset (paragraph 109) and preventing delivery of the attractive walking and cycling network paragraph 116 requires.

Achieving well-designed places (paragraphs 131, 135 and 139)

Paragraph 131 establishes that 'the creation of high-quality, beautiful and sustainable buildings and places is fundamental to what the planning and development process should achieve.'

Paragraph 135(f) requires development to 'create places that are safe, inclusive and accessible and which promote health and well-being, with a high standard of amenity for existing and future users.' Paragraph 139 states that 'development that is not well designed should be refused, especially where it fails to reflect local design policies and government guidance on design.'

A residential scheme whose main internal link roads fail LTN 1/20, whose primary spine road exceeds the manual wheelchair gradient threshold over 104.7m, and which proposes LTN non-compliant roads for highway adoption cannot satisfy these requirements.

10.3 Bristol Local Plan – Core Strategy

Policy BCS10: Transport and Access Improvements

BCS10 is the strategic Core Strategy policy for transport and access, requiring new development to support accessible transport provision and prioritise walking, cycling and public transport; it is implemented in detail through policy DM23 (Section 10.4 below). The 25/14849/M refusal notice expressly identified BCS10 as breached.

The confirmed gradients on Roads 4, 8 and 10 replicate the fundamental accessibility failure of the refused application, reflecting the site's irreducible topography and the single-access arrangement.

Policy BCS21: Quality Urban Design

BCS21 requires new development to achieve quality urban design creating safe, accessible and functional places for all users. The 25/14849/M refusal notice expressly identified BCS21 as breached.

A scheme whose main link roads run at up to 5.0% for up to 55m without landing stages, and whose spine road exceeds the wheelchair gradient threshold for over 100m, cannot achieve quality urban design for all users.

10.4 Bristol Local Plan – Site Allocations and Development Management Policies

Policy DM4: Wheelchair Accessible Housing

DM4 requires that 2% of housing units in developments of 50 dwellings or more are designed to be wheelchair accessible, or easily adaptable for wheelchair users. The proposed scheme of 260 dwellings triggers this requirement, necessitating a minimum of five wheelchair accessible units.

The confirmed gradients create barriers for wheelchair users within the very streets proposed for adoption. Wheelchair accessible dwellings are of genuine functional value only within a street network through which wheelchair users can move freely and safely.

Policy DM14: The Health Impacts of Development

DM14 requires developments to: (i) address any adverse health impacts; (ii) provide a healthy living environment; (iii) promote and enable healthy lifestyles as the normal, easy choice; and (iv) provide good access to health facilities and services. The policy states expressly that 'developments that will have an unacceptable impact on health and wellbeing will not be permitted.' DM14 also requires a Health Impact Assessment for residential developments of 100 or more units; the proposed scheme of 260 dwellings triggers this requirement.

The 4.9–5.0% north–south streets will deter walking and cycling for a significant proportion of residents — particularly those with mobility impairments, elderly people, parents with young children and people with cardiovascular or respiratory conditions. The evidence consistently shows that steeply graded environments impede active travel; this is an adverse health impact that is not adequately addressed, in breach of DM14.

Policy DM23: Transport Development Management

DM23 requires all development to provide: '(i) safe and adequate access for all sections of the community within the development and onto the highway network including designs which secure low vehicle speeds' and '(iv) for pedestrians and cyclists including, where appropriate, enhancing the pedestrian and cycle network.'

The BCC Gradients guidance identifies maxima of 5% for highway adoption and 2.5% for manual wheelchair use. Roads 4, 8 and 10 (4.9–5.0% for 50–55m without landing stages) fail the LTN 1/20 framework that underpins TDM adoption requirements, and Road 3 (3.4% for 104.7m) fails the 2.5% wheelchair standard on a proposed adoption road.

10.5 The refusal of application 25/14849/M

Bristol City Council refused planning application 25/14849/M on 20 May 2026. The single reason for refusal states that the scheme 'fails to demonstrate adequate inclusive accessibility provision' because '6 out of 11 roads have a gradient of 1/20 over 30 metres in length and do not have landing stages.'

The refusal notice identifies conflicts with the following policies and guidance:

- NPPF – inclusive accessible design and well-designed places
- Policy BCS10 – Transport and Access Improvements
- Policy BCS21 – Quality Urban Design
- Policy DM4 – Wheelchair Accessible Housing
- Policy DM14 – The Health Impacts of Development
- Policy DM23 – Transport Development Management
- Department for Transport Inclusive Mobility guidance
- LTN 1/20: Cycle Infrastructure Design
- Bristol City Council Gradients guidance (October 2022)

The longitudinal sections submitted with this application confirm the factual basis for that refusal: Roads 4, 8 and 10 are materially unchanged at 4.9–5.0% for 50–55m. The gradient constraint is not an artefact of measurement; it is embedded in the applicant's own engineering drawings.

10.6 Conclusion

The proposed scheme at Brislington Meadows conflicts with policies BCS10, BCS21 (Bristol Local Plan Core Strategy), DM4, DM14 and DM23 (Site Allocations and Development Management Policies), and with NPPF paragraphs 96, 109, 116, 131, 135 and 139. This conclusion is consistent with Bristol City Council's formal refusal of application 25/14849/M on 20 May 2026.

The gradient constraints reflect the site's fundamental topography. Any revised application would need a different layout concept demonstrating inclusive accessibility — meeting BCC Gradients standards, LTN 1/20 and DfT Inclusive Mobility — across the whole development, not merely on individual roads.

However, the constraints imposed by the terms upon which the outline planning application was approved mean that this will not be achievable, so the proposal to develop Brislington Meadows should be abandoned.

Acknowledgement

Analytical research, policy review and initial drafting were undertaken with the assistance of Claude (Anthropic, 2025). All technical conclusions and professional judgements are those of the author.

Annex A: Methodology for Extraction of Gradient Data from Rappor Engineering Longitudinal Section Drawings

1. Source Documents

The gradient data in this assessment is taken directly from three engineer-certified road longitudinal section drawings submitted with planning application 26/11597/M:

1. **Drawing 3066-RAP-CE-DR-C-4010, Rev A, dated 10 April 2026** (Sheet 1 — Roads 1, 2, 2TH and 3)
2. **Drawing 3066-RAP-CE-DR-C-4011, Rev A, dated 10 April 2026** (Sheet 2 — Roads 3TH, 4, 5, 6, 6TH, 7, 8 and 9)
3. **Drawing 3066-RAP-CE-DR-C-4012, Rev A, dated 10 April 2026** (Sheet 3 — Roads 10 and 10TH)

All three drawings were prepared by Rappor Engineering on behalf of the applicant. They form part of the formal submission for application 26/11597/M, accessible via the Bristol City Council planning portal.

2. Nature of Longitudinal Section Drawings

A road longitudinal section drawing shows the vertical profile of a proposed road along its centreline. For each road, the drawing presents two overlaid profiles: the existing ground level and the proposed formation level (the finished road surface). The horizontal axis represents distance along the road from a defined starting chainage; the vertical axis represents level above Ordnance Datum (AOD).

Because gradients on a residential street are typically a small fraction of the horizontal distances involved, the vertical scale is exaggerated relative to the horizontal — in these drawings, by a factor of five — so that gradient changes are visually legible. The drawings also record curve geometry using hog curves (crests) and sag curves (valleys), expressed as K values and curve lengths. A hog or sag curve terminates one gradient segment and begins another.

3. How Gradient Values are Recorded on the Drawings

Crucially for this assessment, the gradient and run length for each section of road are not inferred by scaling from the drawing. They are stated explicitly as text annotations on the drawing itself, in the standard engineering form:

GRADIENT [X.X%] ([1 in XX]) / LENGTH = [XX.XXX]m

These annotations are placed by the design engineer against each straight gradient segment and are engineer-certified values forming part of the formal design submission. They were not estimated or inferred by the authors of this assessment.

4. Extraction Process

The gradient annotations were extracted from the three drawings using PDF text extraction applied to the drawings as submitted. The extracted values for each road were matched to the corresponding road label on the drawing and tabulated. Where a road has multiple gradient segments, all annotated segments were recorded. The maximum gradient and its annotated run length were identified as the relevant measure for LTN 1/20 assessment, since it is the steepest sustained gradient that governs compliance.

The following gradient values were extracted and attributed to each road:

Road	Drawing	Max. Gradient	Annotated Run Length
Road 1	4010	4.0% (1:25)	42.997m (also 2.6% for 88.701m)
Road 2	4010	5.0%	short run between vertical curves (not annotated); also 1.2% (1:80) for 17.558m
Road 2TH	4010	0.0%	9.900m
Road 3	4010	3.4% (1:30)	104.683m
Road 3TH	4011	5.0%	11.356m
Road 4	4011	4.9% (1:20)	49.844m
Road 5	4011	4.4% (1:23)	48.128m (also 3.1% for 12.328m)
Road 6	4011	1.4% (1:69)	83.866m
Road 6TH	4011	1.1%	11.412m
Road 7	4011	3.6% (1:27)	34.816m
Road 8	4011	5.0% (1:20)	55.383m
Road 9	4011	4.9%	short run to hog curve (not annotated)
Road 10	4012	4.9% (1:20)	54.470m
Road 10TH	4012	4.7% (1:21)	12.201m

Table A1: Gradient annotations extracted from Rappor Engineering longitudinal section drawings (Drawings 3066-RAP-CE-DR-C-4010, 4011 and 4012, Rev A, 10 April 2026).

5. LTN 1/20 Compliance Assessment

Each road was assessed against LTN 1/20 Table 5-4 (Cycle Infrastructure Design, Department for Transport), which sets maximum desirable gradient lengths for cycling and walking infrastructure. The applicable thresholds are:

Gradient	Max. desirable length	Applicability at Brislington Meadows
2% (1:50)	150m	Achievable on east-west terrace roads following contours
2.5% (1:40)	100m	Achievable on gently graded terrace roads
3% (1:33)	80m	Potentially achievable with careful layout
5% (1:20)	30m	Roads 4, 8 and 10 at 4.9–5.0% for 50–55m: non-compliant

Table A2: LTN 1/20 Table 5-4 maximum desirable gradient lengths and applicability at Brislington Meadows.

Interpolation

For gradients falling between the tabulated values, the maximum desirable length was determined by linear interpolation. For example, at 3.4% (between the 3% and 5% tabulated values):

$$80 - [(3.4 - 3.0) \div (5.0 - 3.0)] \times (80 - 30) = 80 - (0.2 \times 50) = 70\text{m}$$

A road was recorded as non-compliant where its annotated run length at the maximum gradient exceeds the interpolated LTN 1/20 maximum desirable length for that gradient.

6. Cross-Referencing with BCC TDM Assessment

The findings were cross-referenced against BCC's Transport Development Management (TDM) assessment (Appendix 3 to the Report to Committee Addendum, dated 8 May 2026), which

independently identifies Roads 3, 4, 5, 8, 9 and 10 as 'Not Compliant' with LTN 1/20. Where the drawing analysis and the TDM assessment agree on non-compliance, that finding is stated with confidence.

Road 9 is noted as a special case. The current drawings (3066-RAP-CE-DR-C-4011) show only a short 4.9% run to a hog curve (K = 3.373), with 1.0% beyond, which is compliant on the drawing data alone. The BCC TDM assessment nonetheless records Road 9 as non-compliant, which may reflect an earlier profile or the road renumbering between applications. Road 9 is accordingly recorded as non-compliant per the TDM assessment, with the current drawing data noted alongside. The current drawings (3066-RAP-CE-DR-C-4011) show a gradient of 3.1% over 12.328m to a hog curve, which is compliant on the drawing data alone. The BCC TDM assessment, which was prepared against an earlier set of drawings, records Road 8 as non-compliant on the basis of the earlier profile (4.9% for 56m). Road 8 is accordingly recorded as non-compliant per the TDM assessment, with the current drawing data noted alongside.

Annex A to Brislington Meadows Road Gradient Assessment Note, July 2026 (planning application 26/11597/M). Analytical research undertaken with the assistance of Claude (Anthropic, 2025). All technical conclusions are those of the author.