
Proposed Residential Access, Old Belses - Technical Note

Introduction

ECS Transport Planning has been commissioned by Mr Kenneth Short to prepare an access layout drawing and accompanying Technical Note in support of a new access to serve a residential dwelling on land to the east of the B6400 at Old Belses.

The findings of this study are based on a site visit (by design team members) and existing traffic observations. Consideration has also been given to the requirements of local and national government transport planning guidance and policies.

Proposals

Mr Kenneth Short proposes to construct a residential dwelling on undeveloped land to the east of the B6400, bound to the north by a grazing land and a residential property, to the east by woodland, to the south by a local access road to Bloomfield and to the west by the B6400.

The property will be located in the south western area of the site adjacent to the existing cluster of properties. Two access options are available as follows:

- a new simple priority junction with the B6400 on the western boundary which will be supplemented with a layby for refuse collection; and
- formalisation of the existing field access on the minor unnamed road to the south.

Internally, the access will remain private and form part of a surfaced driveway with dedicated parking and an internal turning facility.

The site boundary is illustrated on architectural drawings enclosed.

Access

New Access with the B6400

Adjacent to the site, the B6400 operates as a single carriageway road in an east – west direction and is subject to national speed limit restriction. The road connects the A68 in the east with the A7 in the west, routing through various villages, such as, Ancrum, New Belses, Old Belses, Lilliesleaf, Riddell and Clerklands.

Given the rural nature and regular shifts in alignment on the B6400, traffic volumes and speeds are generally low. Transurveys Ltd, an independent traffic survey company, were commissioned to undertake an Automatic Traffic Count (ATC) survey on the B6400 in the vicinity of the site to record existing 85th percentile speeds to assist determining appropriate visibility splays for the proposed residential access.

The 7 day 24 hour survey took place between Thursday 8th September 2022 and Wednesday 14th September 2022. The volume of traffic recorded confirmed the route is lightly trafficked with Average Annual Daily Traffic (AADT) flows of 241 two-way movements. The 7 day average peak hour flow was recorded as 25 two-way movements between the hours of 1100 – 1200. 85th percentile speeds of 34.4mph and 37.5mph were recorded eastbound and westbound, respectively.

Scottish Borders Council adopts the SCOTS National Roads Development Guidance for design of new transport infrastructure. ECS Drawing 22079_001, enclosed, illustrates the layout of the proposed access, which conforms with the design guidance contained within SCOTS.

The junction has been designed with a 5.5m carriageway which will be proposed for adoption to the bell-mouth and be surfaced to allow the introduction of suitable drainage and ensure that loose material is not introduced on to the public road. Standard residential road radii of 6m has been introduced on either side of the access.

SCOTS indicates that an appropriate X distance for lightly trafficked accesses is 2.4m, and appropriate visibility splays can be determined from recorded speeds. SCOTS indicates that speeds of 30mph should provide splays of 90m and speeds of 40mph should provide splays of 120m. As such, on a pro-rata basis, appropriate Y distance splays are calculated as 103.2m to the east and 112.5m to the west.

ECS Drawing 22079_001 enclosed demonstrates that a Y distance visibility splay of 103.2m and 112.5m is achievable to the east and west, respectively. Vegetation will be removed from the public verge to ensure the visibility envelope is achieved. Vegetation will be maintained in order to achieve a visibility envelope of 1.05m (eye height) to 600mm (object height).

The access can be designed to the relevant standard to support a single dwelling access. As such, the proposed access meets the relevant design guidance and is therefore considered to meet the necessary road safety criteria.

Existing Field Access

An alternative access option is to formalise the existing field access from the unnamed road on the southern boundary of the site. The access would be in the form of a simple driveway type access leading to the property.

Given the proximity of the access to the B6400 / unnamed road junction, circa 10m, forward sight distance to the access for approaching motorists is an important consideration. It is evident that vehicles approaching the junction will be travelling at considerably reduced speeds as they require to negotiate the junction and, in some circumstances give way.

Right turning traffic in to the unnamed road from the B6400 will clearly have a clear line of sight to the access and will be able to react to any vehicles entering / exiting the access. However, the forward sight for vehicles turning left from the B6400 is currently obscured by a hedgerow.

ECS drawing 22079_002 enclosed shows the extent of the hedge which should be removed to facilitate a forward sight distance for both 30mph and 20mph. The reduced speeds are intended to reflect the speed of turning vehicles which will clearly be significantly below the measured speed of traffic on the route.

The aforementioned drawing also demonstrates the proposed location and nature of the proposed access. It is considered that the proposed access can safely serve the property with no impact to existing road users.

Summary and Conclusions

ECS Drawing 22079_001 enclosed demonstrates that an appropriate access arrangement can be formed with the B6400 with the required visibility splays achieved upon exit from the site. Furthermore, a layby has been introduced to the access design to ensure refuse collection can be undertaken without disrupting traffic flow.

ECS drawing 22079_002 indicates that the existing field access on the southern boundary of the site could be altered to a residential access with appropriate forward sight distance.

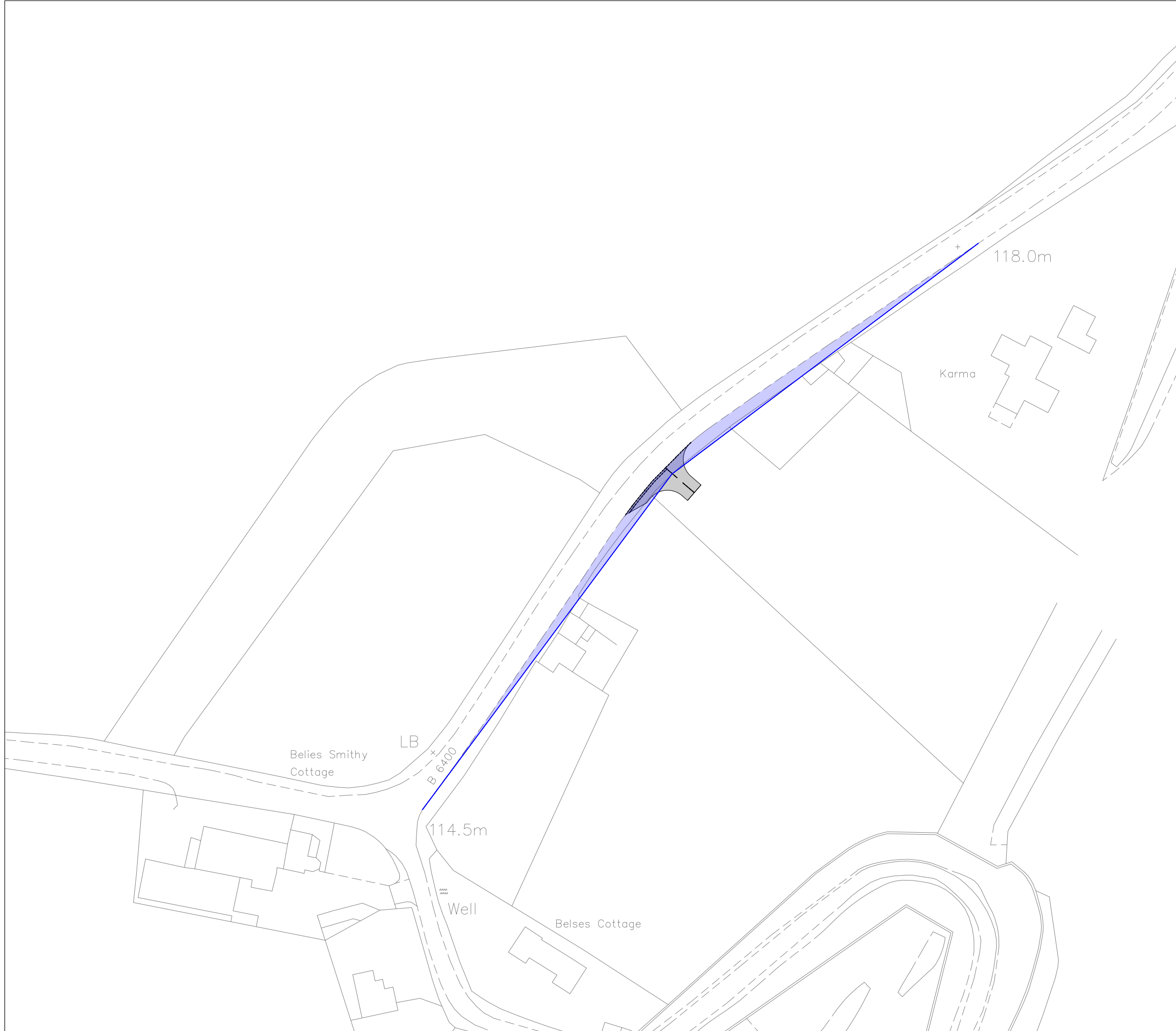
The proposed accesses meets the requirements of Scottish Borders Council design guidance, therefore, it is considered that there are no road safety reasons for refusal.

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Notes: -

Visibility Splay 2.4m x 103.2m (east) —

Visibility Splay 2.4m x 112.5m (west) —



REV	DATE	AMENDMENTS	DRAWN	CHK	APP
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Client
MR KENNETH SHORT

Project
PROPOSED RESIDENTIAL DEVELOPMENT, OLD BELSES

Title
INDICATIVE ACCESS ARRANGEMENT & VISIBILITY SPLAYS

Team	Drawn	Checked	Approved
-	SS	MS	MS

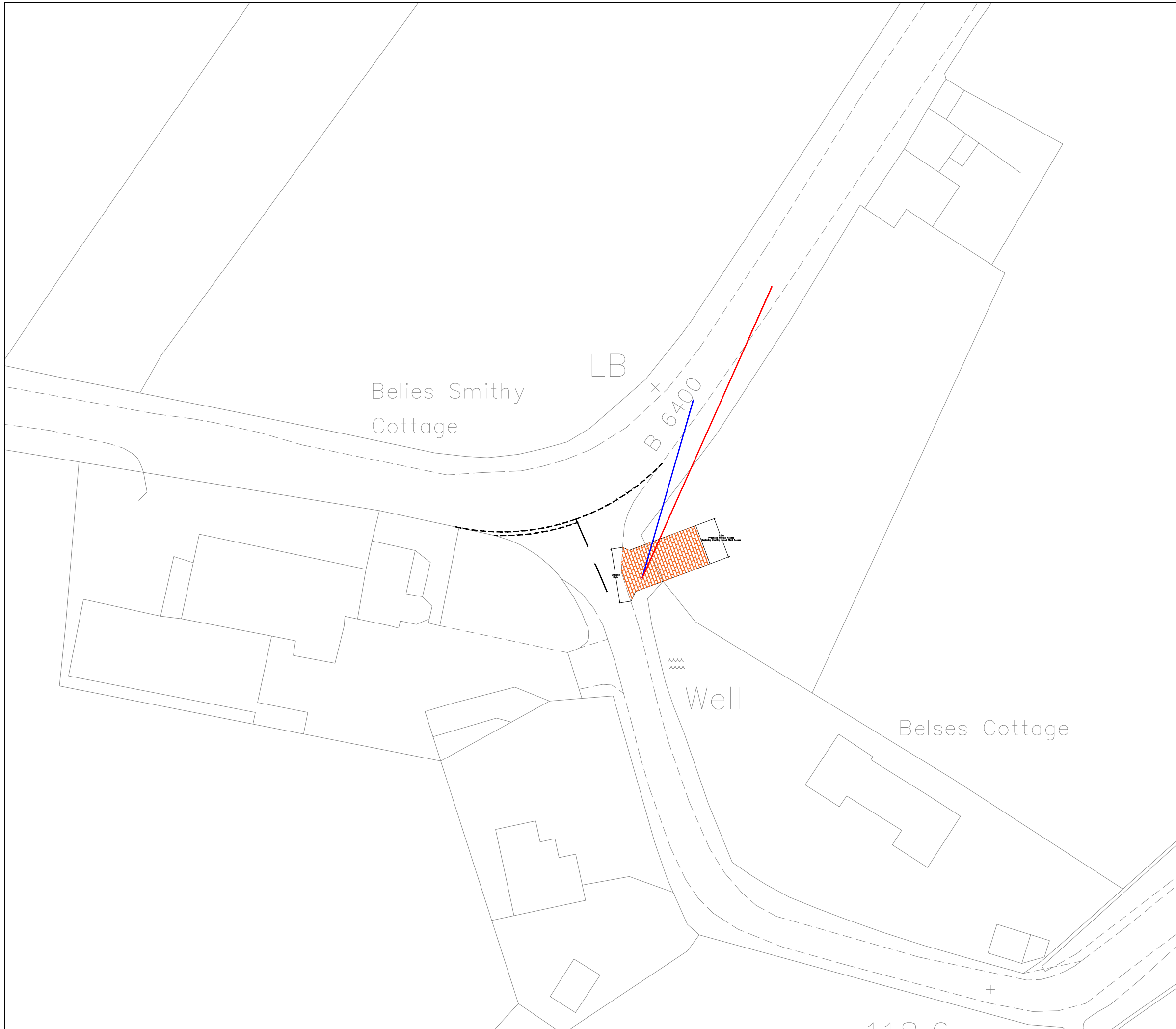
Scale @ A3	Date
1:1000	09.11.22

Project No.	Drawing No.	Rev
22079	22079_001	-

Purpose of Issue Preliminary For Tender For Construction
 _____ For Information For Approval As Built

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Notes:

FSSD 20mph - 25m ———
 FSSD 30mph - 43m ———

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Project
PROPOSED RESIDENTIAL DEVELOPMENT, OLD BELSES

Title
INDICATIVE ACCESS ARRANGEMENT & VISIBILITY SPLAYS (Option 2)

Team	Drawn	Checked	Approved
-	SS	MS	MS

Scale @ A3	Date
1:500	09.11.22

Project No.	Drawing No.	Rev
22079	22079_002	-

Purpose of Issue Preliminary For Tender For Construction
 _____ For Information For Approval As Built