

Important information for Stage Note users

Corner Arcs

Each corner arc (given as a number) is a relative indicator of how open or tight the corner is, without reference to how fast it may be negotiated. The noted arc (and any variation to it) is based on the overall shape of the corner, irrespective of any inconsistencies in the inside or outside edges. Stage note users are solely responsible for how they negotiate each corner.

Driving lines

It is important that all Stage Note users check their interpretation of suggested driving lines, particularly where crests are involved. Individual driving lines may vary based on speed and driving style.

Cumulative Distances

Cumulative distances shown in the Stage Notes are an approximate guide only. Distances are measured by GPS, and are rounded to the nearest 50m. As a result they may not correlate with those given by event organisers.

Single Event License:

Smoothline Stage Notes are provided on a single event basis. The license fee for using Smoothline Stage Notes is specific to each level of notes and each event. Payment of this fee provides users the right to use Smoothline notes for one event only.



QUICK — START GUIDE

At Smoothline we're dedicated to producing easy to use Stage Notes that contain all the information you need.... and nothing you don't.

<u>Symbols:</u> Intuitive symbols, abbreviations and formatting empower co-drivers to quickly recognise which information relates to each corner, avoiding lengthy and imposing lines of text.

Quick Tip: Co-drivers new to Smoothline may benefit from writing the meaning above each symbol in pencil for the first stage or 2 while they adapt to our system.

<u>Gaining Full Value:</u> Much of the value in our notes is gained through understanding the exact meaning of each call and the often subtle differences between similar terms. A full glossary is included (printed on yellow pages), but to get you started we have included the most commonly used terms and symbols here:

<u>Order of Calls:</u> We carefully manage the order of calls for each and every corner. The specific order for each individual corner is custom-matched to the order in which driver needs to react.

Distances:		
Symbol	Called as	Description
&	And	A short straight between road features of 10 to 20 metres.
\rightarrow	Into	A short straight between road features of 20 to 40 metres.
(str.)	Straight	A piece of road that is not quite straight, but should be treated as though it is .
50, 100	Wherever p	ossible, we start each line or page with a significant distance. Distances are normally called
Distances on the	with the preceding corner, but are placed on a new line to minimise the risk of co-drivers falling behind	
page	by "taking a	breather" without being conscious of what is ahead, particularly late in an event.

Cautions:		
©	Care	Highlights a section of road requiring increased care.
!	Caution	Indicates a section of road that presents a significant threat requiring a reduction in speed.
⟨ D ⟩	Danger	Extreme caution is required to safely negotiate these sections of road.

Driving Lines:		
bec Becom	Recomes	Indicates 2 corners of the same direction blend together, eg 5R(bec 4). These drive like
	Decomes	double-apex corners.
(IN)	In	Instructs the driver to not use the outside metre or so of road width exiting a corner.
Hug	Hug	Instructs the driver to stay on the inside half of the road exiting a corner.

Road Features etc:			
/	Over	Indicates that a feature of the road begins or occurs "over" a crest, brow or similar.	
•	Bump	A bump/dip in the road that is likely to unsettle the car.	
(cb)	Camber	Indicates that the road construction is "off camber" (falls outwards).	
$\overline{}$	Brow	Small crest blocking view of the road, not expected to markedly unsettle the car.	
С	Crest	A crest that is likely to unsettle the car.	

If in doubt pick up the phone:

For any questions call Smoothline on 0402 256 395. Please call as often as you need!



Overview

Smoothline Stage Notes are designed to provide rally teams with high-quality, succinct directions that are easy to digest. Our mission is to assist drivers and co-drivers to enjoy each event by empowering them to safely perform to the best of their potential. We aim to drive the Smoothline because smooth is fast, and smooth is safe.

Who are Steve Glenney and Bernie Webb?

Steve & Bernie have more than 3 decades combined experience in rallying at all levels of the sport, during which time they have excelled in both Tarmac and Gravel disciplines. To date Steve and Bernie have been signed to a range of factory backed teams for Tarmac, Gravel and Cross-Country Rallies as well as Off Road. An overview of their achievements can be found on the next page.

Where do Smoothline Stage Notes come from?

Creating good Stage Notes (or pacenotes as they are otherwise known) requires a blend of art and science. Good notes provide an exact description of where the road goes, and should assist the user in driving the perfect line through every corner. Likewise, good notes provide the co-driver with visual cues that facilitate the delivery of each note with correct timing. Creating such a set of notes requires the balanced input of both an experienced driver and co-driver.

At Smoothline we believe Stage Notes are more than a set of directions, rather they are what bonds a driver, a co-driver and a car. Stage notes that are used effectively can empower a team to perform well while safely enjoying the experience.

It is well known that not every driver likes a car to have the same handling characteristics, and the same is true for Stage Notes. Accordingly Smoothline offer 3 variants, each with the same measured consistency but prepared to different levels of complexity. This structure allows each team to determine exactly how much information is called during each competitive stage.

Preparation of Smoothline Stage Notes involves careful evaluation of all road features including crests, corner progressions and corner lengths, each of which affect the driving line. These Stage Notes help teams perfect the line through each corner, taking some on a gentle journey of discovery as subtle differences are revealed.

Our philosophy is to produce notes that allow a driver to "just listen and drive", reducing the need to process excess information and make critical decisions at speed. In achieving this, each word is selected carefully and placed in the order in which the driver needs to react. Smoothline Stage Notes describe the nature of every corner without crowding the stream of information.







The co-driver's needs are given equal attention. Intuitive symbols and timing cues are used, and every line and page break are chosen carefully. These measures make smooth, timely delivery of the notes achievable. Frequent "cumulative distance" measurements are recorded in the notes along with visual landmarks. These give the co-driver confidence they are calling the correct notes and would help minimise the time spent "off notes" should anything go awry.

Should I use the 1-6 or 1-10 format?

Latte or cappuccino? STi or Evo? There are arguments for and against both, but in the end the decision is personal. That said, we encourage any crews who do not have a particular bias to walk the 1-10 path. Smoothline Stage Notes are available in both 1-6 and 1-10 formats, with both of our systems giving exactly the same number of options (because 1-6 uses plusses).

When choosing which system to use, consider the time it takes a co-driver to say each word in any set of Stage Notes, remembering that the car is travelling toward the upcoming corner. In turn, limiting the volume of information in the Stage Notes gives the driver more time to hear, process and react to each call.

Consider these two options for calling the same pair of corners:

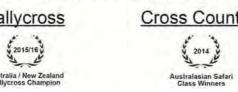
- "left five plus into triple caution right two plus"
- "nine left into danger three right"

What does Smoothline provide?

At Smoothline we provide a range of Stage Note options to cater for both your current and future needs. Our notes are crafted by one of the most successful pairings in Australian Rallying who are available to provide backup support by listening and assisting you wherever possible. Tapping into Steve and Bernie's experience through Smoothline can give you the confidence to safely drive to the best of your potential while enjoying the experience.

Record of Achievement - Steve Glenney / Bernie Webb





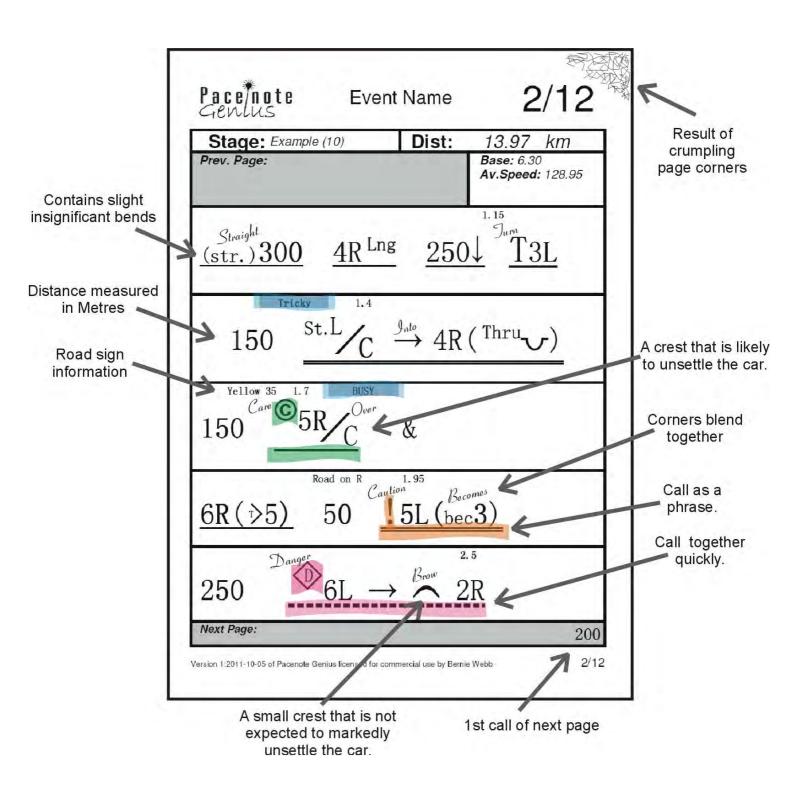






Stage Note Preparation Example

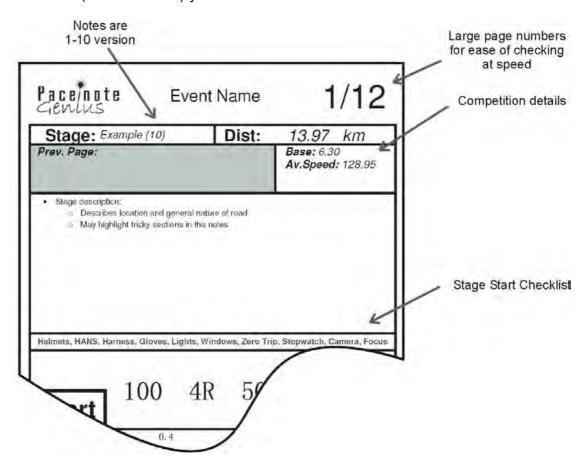
(and a few features explained)



Smoothline Stage Notes Handy Hints

At Smoothline we work to ensure each and every customer get the most from the Stage Notes. This ethos is what governs how we write, format and present the notes.

If you have any questions regarding Smoothline Stage Notes we will happily do whatever we can to help. Please call whenever (or as often as) you need!



Understanding the notes:

Each term in the stage notes is chosen carefully and has a very specific meaning. Full explanations of each term are provided in the glossary (yellow section of each stage note book). Understanding the exact meaning of each term will help drivers extract more value from the notes, and can assist co-drivers in delivering the notes well.

Hint:

Some similar terms that are worth understanding the difference between are:

- Brow vs. Crest
- In vs. Hug
- Opens/Tightens vs. Becomes

Co-driver Tips

Underlining:

The layout employed by Smoothline helps co-drivers deliver the notes well. We utilise underlining to guide timing, as well as providing written cues to indicate where the nature of the road is about to get busier (requiring faster calling) and where some deceptive areas are lurking (marked as "Tricky").

Hint:

It is important to remember that different cars and drivers will require notes to be delivered in a different fashion. During recce check and adjust the relevance of timing information the same way you would the number assigned to a corner.

Shorthand:

Most Stage Notes use some from of shorthand. At Smoothline we believe symbols are an important tool for allowing co-drivers to visually gather information quickly from the page (much quicker than reading a line of text). We use intuitive symbols wherever possible to make life easier for everyone.

Hint:

Anyone new to our shorthand would be well advised to write the meaning above each symbol before they begin using the notes. This will help both recce and the rally flow much better.

Turning Pages:

Being able to turn individual pages easily is a key component of doing a good job in the co-drivers' seat. It doesn't take much imagination to work out some potential outcomes of turning 2 pages at once! We carefully choose the paper our notes are printed on, but there is more that can be done....

Hint 1:

Crumpling the top corner of each page (and then flattening out again) before the event can make pages easier to separate on the run. Be aware that this will make the corner of the book much fatter (but doing it the night before a rally can allow the pages to settle).

Beware of dog-earring pages as they can have a tendency to clip together.

Highlighting:

Many co-drivers use highlighters to show where important calls are located. The calls you may like to highlight include:

- Cares, Cautions and Dangers
- Timing Cues
- Prominent visual features (bridges etc).

Hint:

It's a good idea to use different coloured highlighters for each feature. This makes it easier to know what's coming up in the notes.

Stage Descriptions and Checklists:

Smoothline routinely include a stage description at the beginning of each stage as well as start and finish checklists. The checklists can help you ensure you have everything in order before and after a competitive stage.

Hint:

Going through the stage description and checklist aloud just before a stage can help both driver and co-driver focus on the stage ahead.

Glossary - Medallion Ten

Corner Arc Calls		
4L	Four Left	Corners are graded according to their arc, and assigned a number from 1 to 10. 1 represents a tight hairpin and 10 a very open bend. It is important to note that the number assigned is
6R	Six Right	an objective measurement of the corner's arc, not a subjective estimation of how fast it can be negotiated.
FL	Fast Left	A corner that requires very little deviation.
T4L	Turn Four Left	Indicates the corner is associated with a <u>defined road junction</u> requiring teams to <u>turn</u> <u>from one road to another</u> .
K4L	Keep Four Left	Indicates that the corner is associated with a <u>less defined</u> road junction or where the passage used is more open and flowing than a traditional "square corner"
s.o.	Straight On	Denotes an intersection where the stage continues straight ahead (although not necessarily following the normal flow of traffic).
bec	Becomes	The arc of the corner opens (without really becoming straight) before tightening to become the next corner. "Becomes" is often used where 2 corners appear to blend together.
50 bec	50 Becomes	There is a noteworthy distance between corners, but the road never really straightens before tightening to become the next corner.
	Opens	The arc of the corner changes becoming less tight.
7>	Tightens	The arc of the corner changes becoming tighter.
Ea	Early	The apex of the correct driving line on this corner is earlier in the corner than expected. This often drives like an opening corner.
La	Late	The apex of the correct driving line on this corner is further around the corner than expected. This often presents (and drives) like a tightening corner. Also used as "V.La" for Very Late.
(RE)	Right Entry	A small, generally insignificant bend in the road that immediately precedes a tight corner. Corner speed should be sacrificed to set the car up for the following corner.

Corner Length Calls		
Sh 6L	Short	A corner that maintains its arc for less distance than usual.
6L		A corner of "standard" length.
6L Lng	Long	A long corner (may also apply to crest or any other road feature).
6L V.Lng	Very Long	A very long corner (may also apply to crest or any other road feature).

Multiple Occurrences		
Twice	Twice	Indicates that the same corner appears twice in a row. <u>Used to avoid confusion for crews, particularly those who utilise repeated calls.</u>
Dbl	Double	Indicates that 2 of a particular feature occur in <u>immediate</u> succession.
Tpl	Triple	Indicates that 3 of a particular feature occur in <u>immediate</u> succession.
Again	Again	Indicates 2 similar features occur in <u>close</u> succession eg. 4L Into 4L(Again).
Thn	Then	Indicates 2 similar <u>variations</u> occur in immediately succession eg. <u>5R(bec4) Thn (bec 4 Lng)</u> .

Distance Between Corners		
6R 7L		Where a second corner immediately follows the first with no straight road in between, no "distance call" is used in the notes. The example is read simply as "Six Right, Seven Left".
6RL	Six Right Left	This is used where two corners of the same arc and length, but of different direction are located immediately after each other. A shorter version of Six Right, Six Left.
&	And	A measured distance of 10 to 20 metres
→	Into	A measured distance of 30 to 40 metres
50	Fifty	A measured distance of 50 metres.
(str.) 100	Straight 100	A piece of road that is not straight, but for the purposes of the stage note efficiency is called as such. Often this piece of road will contain multiple insignificant bends and may extend beyond the driver's field of view.
(Kinks) 50	Kinks 50	Similar to "Straight" but with more pronounced bends.

Road Width Calls		
NRW	Narrow	The usable road surface is narrower than on approach. <u>In many cases this combines the concepts "Don't Cut" and "(IN)"</u> .
N's	Narrows	The usable road surface narrows progressively.

		Warnings
©	Care	Highlights a <u>section</u> of road requiring increased care and concentration to negotiate safely. <u>As</u> with other warning calls, Care is often used to signify that a potentially dangerous corner is 1 or 2 corners ahead.
!	Caution	Highlights a <u>section</u> of road that presents an obvious threat to any driver. Such a section of road often requires drivers to reduce their pace.
\bar{D}	Danger	Extreme caution is required to safely negotiate these sections of road. The nature of the road "flow" often changes dramatically and unexpectedly (frequently out of sight to the approaching driver) where "danger" is used. Such a section of road often requires drivers to significantly reduce their pace.
(P)	Don't Cut	Indicates that a hazard exists close to the road on the inside of a corner.
Braking	Braking	Indicates that the road ahead requires a marked reduction in speed and therefore recommends that the driver be braking (as opposed to accelerating or coasting) through the road feature associated with the braking call (eg "50 Braking" or "Long Crest Braking").
(AIR)	Air	Indicates a competition car will likely become airborne, appropriate caution should be used.
(Light)	Light	Indicates a competition car may become airborne or have the suspension unweighted, appropriate care should be used.
Blind	Blind	Indicates vision of the associated corner or road feature is obstructed on approach.
TRIC	CKY	The related section of road may be deceptive or "not play out as expected on approach".
Optional Information		Underlined information above the main line of Stage Notes is optional further information. <u>Co-drivers should make their driver aware of this information in reconnaissance for possible inclusion</u> .
Accidents Common		Highlights areas where accidents have occurred or are likely to occur.
[Quick Pg Change]		Instructs the co-driver to turn the page quickly as the Stage Notes at the start of the next page should be called shortly after those at the end of the current page.

Driving Line Calls		
In	In	Instructs the driver to drive a line that finishes at least 1m inside the outer edge of the road on the exit of the corner. This call is often used to ensure potential hazards are avoided.
Hug	Hug	Instructs the driver to drive a line that finishes on the inside half of the road on the exit of the corner. This call is generally used to set the car up for the approach to the next corner but may be used in some instances to ensure a potential hazard is avoided.
(MdI)	Middle	Tells the driver to place the car in the middle of the road to maintain the correct driving line.
(StyL)	Stay Left	Instructs the driver to place the car on the Left side of the road (or the Right side for StyR) to maintain the correct driving line. This may be refined to (Sty½L) or "Stay Half Left".

	Road Features – Inclines		
^	Brow	A rise or crest that blocks view of the road ahead but is not expected to markedly unsettle the car, however care should be used when cornering over a brow. When used in isolation no significant directional deviation is associated with the brow.	
С	Crest	A crest that is likely to unsettle the car, appropriate care should be used. When used in isolation no significant directional deviation is associated with the crest.	
FC	Fast Crest	Denotes where no significant reduction in speed is likely to be required immediately beyond the crest. <u>"Fast" in this context is also used with brows.</u>	
Shp	Sharp	Generally used to describe a crest over which the road "drops away quickly".	
STP	Steep	Indicates the presence of a marked incline or decline. May be used as "STP C" to indicate that the road tends steeply downward after a crest.	
Big	Big	Describes a feature (crest, dip etc) that is larger than most.	
+	Down	The road tends downhill, often requiring increased care to negotiate braking areas, corners etc.	
1	Up	The road tends uphill.	
(cb)	Camber	The road construction is "off camber", or in other words leans outward – drive with care!	
(ON)	On	The road construction is "on camber", or in other words leans inward.	

Road Features – Surface		
Rough	Rough	Indicates an area of rough road surface that may unsettle the car.
Bumpy	Bumpy	Indicates a section of road featuring a number of bumps that are likely to unsettle the car.
Surf	Surface	Indicates a change in road surface construction. Does not indicate whether a subsequent change in grip level will be experienced.
z	Slippery	An area that has been observed to be more slippery than the road approaching.
Z-Hot	Slippery if Hot	Denotes an area where the tar has been noted to, or appears likely to lift in hot weather, making the surface slippery.
Z-Wet	Slippery if Wet	Denotes an area where the surface has been noted to be slippery in wet weather.
Damp	Damp	A section of road that has been noted to be wet when the surrounding road surface is dry. May occur under dense tree cover or where the water drains across the road after rain.
Gravel	Gravel	Indicates an area where a significant amount of gravel has been noted (on an otherwise tarmac-surfaced section of road). This may have been noted either during reconnaissance or in previous events.
Tar	Tar	The road surface changes to become sealed.
Dirt	Dirt	The road surface changes to become un-sealed.

		Road Features – Obstacles
\$	Chicane	A series of objects placed on the road by organisers to slow vehicles during the rally. These may not be in place during reconnaissance and their exact location may be difficult to accurately determine before the day of competition.
Slow Zone	Slow Zone	A zone set out by the event organisers where competitors are required to reduce their speed significantly. The specific speed and conditions vary between events and are contained in the event's Supp Regs or Road Book. In some instances, the initials of what that event calls the zone may be used in the notes eg "SRZ" for Speed Reduction Zone".
ን	Dip	A dip in the road, may unsettle the car.
♣	Hump	A defined hump in the road that is likely to unsettle the car.
•	Bump	A bump in the road (smaller than a hump) that may unsettle the car.
J	Jump	A larger or sharper defined hump in the road that is likely to cause a competition car to become airborne.
#	Grid	A stock grid that crosses the road at ground level and is generally made of spaced steel bars. Grids are often uneven, offer limited grip and may feature large side-posts.
	Gate	Gates/gateways are often <u>narrower than the surrounding road and often incorporate</u> solid posts located on/near the road-side.
][Bridge	A structure raising the road above the surrounding ground, allowing vehicles to cross a watercourse or other depression. Bridges are often narrower that the surrounding roads and they may incorporate raised sides. The road surface on a bridge is often different to the surrounding roads (eg wood) so grip levels may vary, particularly when wet.
Ford	Ford	A structure that allows vehicles to cross a watercourse or other depression that does not significantly raise the road above the surrounding ground. May incorporate raised sides.
X-Ing	Crossing	A railway crossing. These are often uneven and offer limited grip.
Ck	Creek	A defined watercourse which may or may not contain water at the time of the event.
R.A.	Roundabout	A roundabout which may be narrower than the surrounding roads. Often features splinters or traffic islands. The competition route (and therefore Stage Notes) may not follow the legally prescribed course through a roundabout however care should be taken in reconnaissance to ensure all road rules are obeyed.
Island	Island	A traffic island that should be avoided during competition. May also be referred to as a "Splinter".
Traffic Bumps	Traffic Bumps	Indicates the presence of large solid mounds on the road. Generally these are brightly coloured and replace "splinters" at an intersection.
Rd or Tk		Used above the main notes when passing a Road or Track to help re-orientate the co-driver

Relative Locations		
@	At	Indicates that a feature of the road begins or occurs at a defined point (eg post or tree).
@End	At End	Indicates that the associated road feature is located at the furthest point on the road that a driver can see. Also used as "@Top" where appropriate.
ON	On	Indicates that a feature of the road begins or occurs at a defined point (eg crest or bridge).
/	Over	Indicates that a feature of the road begins or occurs in conjunction with a defined road feature (eg crest or brow).
w	With	Used to indicate that two road features exist in unison (eg 5R with dip).
Thru	Through	Indicates that a corner or straight continues through a defined feature (eg dip or gate).
Around	Around	Indicates that the road travels close to and around a defined point (eg post).
AFTER	After	Indicates that a feature of the road occurs or begins after a defined point (eg crest or tree).
Cont.	Continues	Indicates that the nature of the road continues beyond a set point.
Und	Under	Indicates that a feature of the road begins or continues beneath a defined point (eg bridge or tree).
E	Entry	Denotes the associated feature as being at or near the start of a corner.
х	Exit	Denotes the associated feature as being at or near the end of a corner.
IS	Inside	Denotes the associated feature as being at or near the inside of a corner.
os	Outside	Denotes the associated feature as being at or near the outside of a corner.

Timing Indicators		
BUSY	The section of road ahead contains a series of corners that occur in a rapid sequence.	
V.BUSY	The section of road ahead contains a series of corners that occur in a very rapid sequence.	
Single Underline	Indicates which calls refer to a single corner / road feature.	
<u>Double</u> <u>Underline</u>	Denotes a "phrase" containing a series of calls that should be delivered in more rapid succession than normal. These phrases are intended to ensure the driver receives an important piece of information (eg a tighter corner at the end of a phrase) earlier than they would otherwise.	
<u>Dashed</u> <u>Underline</u>	Denotes a "phrase" containing a series of calls that should be delivered together in <u>very rapid</u> succession. These phrases are intended to ensure the driver receives an important piece of information (eg a tighter corner at the end of a phrase) much earlier than they would otherwise.	
	Used at the end of a line to alert the co-driver to the fact that the current "phrase" continues on the next line.	



1/4

Stage: Stage Name (1-10)	Dist:	4.30 km
Prev. Page:		Changes:

Stage Description:

• Description of stage nature and important points to be aware of.

Helmets, HANS, Harness, Gloves, Lights, Windows, Zero Trip, Stopwatch, Camera, Focus

Yellow 35

Start

500

Yellow | Narrow 0.6

8R 50/_{II} 4R 5L

Sykes Rd on L

200 7L & 8R

Next Page: 250 Over Brow



2/4

Stage: Stage Name (1-10)	Dist:	4.30	km
Prev. Page:		Changes:	
1.1			
$250/\sim FC$	\rightarrow F	<u>FL</u>	
<u>@End</u> Tricky	1.7 Yellow	Truck	
350 7L 50 /	~ 6L	La	
=			
100			
Rd on L			
10R Hug &	7L (w •	\rightarrow	9R
	•		
Next Page:			100



3/4

Prev. Page: Changes:	
W: A1	
$100 8R^{\text{V.Lng}} \rightarrow 8R \stackrel{\text{2.3}}{\sim} 6$	<u>L</u>
2.5 Accidents Common SOS	
150 \$\hfrac{1}{2} 8R(\hfrac{1}{2}5) [Surf] T1L	
BUSY [Surf] 2.7 Drain Outside	
$100 \underline{6R^{\text{Hug}} 4L} \rightarrow \underline{5R(\text{IN})}$	
Rd goes white 3.1	
100 !9R(bec6) & 3L	
3.3 Gravel on L	
$150 \frac{\mathbf{C}_{3R}}{3R} \leqslant (Z-Wet)}$	
Next Page:) ©



4/4

Stage: Stage Name (1-10)	Dist: 4.30 km
Prev. Page:	Changes:
©	Shelter 2 3L
[Surf]	
50 <u>8R → 5L</u> 2	StyR ONC (AIR)
	4. 05
$350 \frac{9R}{\frown}$	50(Braking) 4L
	4.3 Rd on L
(str.) 150 5R 2	CI
200 EASE (
Stopwatch, Camera, Stage Time, Zero Trip, S	tage Comments, Tyre Pressures