



ORIENTEERING NSW

ISOM v ISOM 2017 and ISSOM v ISSprOM Map Specifications

The table below compares each symbol in the previous and revised IOF Map Specifications for forest (ISOM) and sprint (ISSprOM) orienteering.

Information in the columns:

- ISOM to ISOM 2017 -IOF – is derived from an IOF publication “What has changed from ISOM 2000?”.
- ISSOM to ISSprOM -IOF - is derived from an IOF publication “What has changed from previous ISSOM 2007”.
- The ONSW columns have been agreed by the ONSW Mapping Advisory Group.

Text in **red** indicates matters where the ONSW Mapping Advisory Group believes it is OK to deviate from the ISOM 2017 or ISSprOM when a map is being fully updated. Please read this document in conjunction with the higher-level material in ONSW’s Updating NSW Orienteering Maps to Conform with Revised IOF Map Specifications [webpages](#).

Symbols used only for course setting are omitted from this table.

ISOM 2017 Symbol No	Symbol name	ISOM to ISOM 2017 - IOF	ISSOM to ISSprOM - IOF	ISOM to ISOM 2017 - ONSW	ISSOM to ISSprOM - ONSW	ISSprOM conversion
101	Contour	ISOM2000 104 Slope line: Moved to 101, 102, 103. ISOM2000 111 Knoll: Application of 101, 102, 103 ISOM2000 114 Depression: Application of 101, 102, 103. No graphical change.	Stairway (532) has been added to the list of symbols which cause a cut in the ISSprOM 2019 contour (101) line.	No change to line Length of Slope line on a contour or index contour shortens. Note: under ISOM 2017 a slope line on a form line becomes smaller than the slope line for a contour.	No change to line. Note: under ISSprOM a slope line on a form line becomes smaller than the slope line for a contour.	Check contours are cut at stairways.
102	Index contour	ISOM2000 105 Contour value: Moved to 102. No graphical change.		No change to line. Contour value (height in metres) font must be Sans serif.	Line width decreases from 0.35mm in ISSOM to 0.30mm in ISSprOM.	-
103	Form line	Thinner line (0.14->0.10). Reason: reduce the visual impact of the form line and reduce the potential problems of gap positions. Shorter gaps (0.25->0.20)	Form line (103): The line width and the structure of the symbol has changed from ISSOM 2017. Line width is now 0.15 mm, dash length 3mm, space length 0.3 mm	The line becomes narrower, the dashes longer and the gap between dashes shorter. Slope line becomes shorter and narrower and is a different symbol to the slope line for contours and index contours.	The line becomes narrower, the dashes longer and the gap between dashes shorter. Slope line becomes shorter and narrower and is a different symbol to the slope line for contours and index contours.	Check that slope tags on form lines use the new form line slope tag symbol.

ISOM 2017 Symbol No	Symbol name	ISOM to ISOM 2017 - IOF	ISSOM to ISSprOM - IOF	ISOM to ISOM 2017 - ONSW	ISSOM to ISSprOM - ONSW	ISSprOM conversion
104	Earth bank	Thick (0.25) base line alternative removed		If there are two widths of main earth bank line on an old ISOM map, remapping might be necessary to determine which symbol should be used (the narrower line or change to impassable cliff). It might be necessary to field check Earth banks to see where the full extent of the earth bank is more than a 0.4mm tag represents.	No changes.	-
105	Earth wall (ISOM 2017) Small earth wall (ISSpoOM)	Thicker line (0.14->0.18) Dots closer (2.5->2)		Line widens, dots get larger and move position. This might need changes to other symbols nearby.	No change	-
106	Ruined earth wall	Thicker line (0.14->0.18) Dots closer (2.5->2), dashes shorter (2.25->2), gaps longer (0.25->0.35)		Line widens, dots get larger and move position. This might need changes to other symbols nearby.	No symbol.	-

ISOM 2017 Symbol No	Symbol name	ISOM to ISOM 2017 - IOF	ISSOM to ISSprOM - IOF	ISOM to ISOM 2017 - ONSW	ISSOM to ISSprOM - ONSW	ISSprOM conversion
107	Erosion gully (ISOM2017) Erosion gully or trench (ISSprOM)	No graphical change (except for the specification of minimum dimensions).	Erosion gully or trench (107): Minimum length has been reduced to 2 mm.	The ability for the line width to reflect the size of the gully has been removed. On some maps the mapper might need to see whether to change symbol, eg to trench or use embankment symbols. A minimum length and specification of the taper has been added. Some erosion gullies can descend to an embankment – in this case a taper is not required. A new sentence: “Contour lines should not be broken around this symbol.” - ignore this – see ISSprOM.	The ability for the line width to reflect the size of the gully has been removed. On some maps the mapper might need to see whether to change symbol, eg use embankment symbols. A new sentence: “Contour lines may be broken around this symbol for better readability.”	A field check might be necessary.
108	Small erosion gully	Dots closer (0.5- >0.45)	Small erosion gully (108): A three dots minimum length has been added.	The new requirement to have at least 3 dots and to break contour lines means some checking of the map is necessary.	The new requirement to have at least 3 dots and to break contour lines means some checking of the map is necessary.	Check map and field check if necessary.

ISOM 2017 Symbol No	Symbol name	ISOM to ISOM 2017 - IOF	ISSOM to ISSprOM - IOF	ISOM to ISOM 2017 - ONSW	ISSOM to ISSprOM - ONSW	ISSprOM conversion
109	Small knoll	No graphical change.	Small knoll (109): the minimum height has been reduced to 0.5m.	<p>“Rocky knolls” was been omitted from the descriptive text. We believe rocky knolls can be shown with this symbol.</p> <p>It seems more sensible to allow a contour line to be broken if a man-made knoll or mound is located on a contour line.</p> <p>Whilst an impassable earth bank can be shown with an impassable cliff symbol, the change to black to denote impassability does not apply to an earth pillar. Perhaps ISOM 2017 should include the text: “Earth pillars are prominent vertical sided earth mounds that are difficult or dangerous to climb and cannot be drawn to scale with a cliff symbol. Earth pillars may be shown with one of the boulder symbols (204, 205, 206).”</p>	<p>The symbol cannot touch a contour, which is new to the sprint specification. This should be checked.</p> <p>Knolls between 0.5m and 1.0m can now be shown.</p>	<p>Field check – minimum height reduced from 1.0 to 0.5m.</p> <p>Check drawing if the symbol is near a contour.</p>
110	Small elongated knoll	No graphical change.		See comments on 109 Small Knoll.	<p>The symbol cannot touch a contour, which is new to the sprint specification. This should be checked.</p> <p>Knolls between 0.5m and 1.0m can now be shown.</p>	See 109 small knoll.

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111	Small depression		Small depression (111): the minimum depth and the minimum diameter have been reduced to 0.5m and 1m. The size of the symbol has changed from 0.95 mm in length to 1.2 mm in length and 0.6 mm in height.	Minimum width: 2 m is new.	ISOM says small depressions do have steep sides, pits do. This should be followed on sprint maps also. Minimum depth: decreases from 1.0m to 0.5 m and width from 2m to 1 m. Horizontal width of the symbol increases from 0.95mm to 1.2m – gaps to nearby features might need to be checked.	Field check – look for smaller depressions.
112	Pit or hole		Pit or hole (112): the minimum depth and the minimum diameter have been reduced to 0.5m and 1m. The length of the symbol has changed from 0.82 mm to 1.1 mm.	Minimum width: 2 m is new.	Minimum depth: decreases from 1.0m to 0.5 m and width from 2m to 1 m. Horizontal width of the symbol increases from 0.82mm to 1.1m – gaps to nearby features might need to be checked.	Field check – look for smaller pits.
113	Broken ground	Specifying maximum and minimum densities and introducing a second broken ground symbol for reduced runnability. Reason: Emphasize that this is an area symbol and add a variant that shows reduced runnability.	Broken ground (113): a minimum of 3 dots is required. Similar to ISOM 2017.	Symbol split into Broken Ground and Very Broken Ground. The way the symbol is drawn also changes.	Some minor changes – most maps won't change.	-

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114	Very broken ground	Added symbol: Distinguish broken ground with reduced runnability.		New symbol	-	See 113 Broken ground.
115	Prominent landform feature	Added symbol: Special prominent landform feature triangle.	Prominent landform feature (115): the symbol is now a triangle. Similar to ISOM 2017.	Symbol changes from an X to an equilateral triangle. This helps map readability for colour vision impaired orienteers. Point features, particularly on sprint maps, should be: <ul style="list-style-type: none"> consistently prominent few in number (unless other features are lacking); definable; and fixed in the terrain. 	Symbol changes from an X to an equilateral triangle. This helps map readability for colour vision impaired orienteers. Point features, particularly on sprint maps, should be: <ul style="list-style-type: none"> consistently prominent few in number (unless other features are lacking); definable; and fixed in the terrain. 	Symbol converted.

ISOM 2017 Symbol No	Symbol name	ISOM to ISOM 2017 - IOF	ISSOM to ISSprOM - IOF	ISOM to ISOM 2017 - ONSW	ISSOM to ISSprOM - ONSW	ISSprOM conversion
201	Impassable cliff	ISOM 2000 Rock pillar/cliffs Split. One part included in ISOM2017 201 (with minimum dimensions) and the other turned into ISOM2017 206 (gigantic boulder) with minimum dimensions.	Impassable cliff (201): The minimum passage between two cliffs has increased to 0.4 mm and the minimum height has been reduced to 1.5 m. The mention forbidden to cross has been removed.	Some field checking might be necessary if the existing map has downward tags showing its full extent from the top line to the foot of a cliff or if gaps between cliffs are narrower than specification. The cartographer might decide to use rounded ends. The decrease in the gap between tags (0.6 to 0.5mm) could cause some drawing issues. <i>For safety reasons, on some maps it might be best to retain the ability for tags to indicate the extent of a cliff – from top line to bottom. For example, bare rock that gradually becomes steeper and is dangerous to descend. The need is greatest if there are also gigantic boulders on the map.</i>	The decrease in minimum height from 2.0 to 1.5m means a field check and a change to 202 Cliff is needed. The increase in tag length could cause cartographic concerns. <i>Rounded ends might be helpful on some sprint maps – especially if tags are omitted.</i>	Field check for cliffs between 1.5 & 2.0m high.
202	Cliff	Thinner line (0.25- >0.2) and removed the thin option (0.18)	ISSprOM 2019 passable rock face (202): the line width has been reduced to 0.25 mm, the minimum height to 0.6m. For passable rock faces shown without tags the end of the line must now be rounded. Similar to ISOM 2017-2	For passable rock faces shown without tags the end of the line must now be rounded. The five changes to dimensions of the symbols can wait until a major update.	Line width changed back to 0.30mm in the second printing of ISSprOM.	Symbol without tags converted to round ends. Field check for change in minimum height.

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203	Rocky pit or cave	ISOM2000 Cave (205) has been deleted and is now included in the ISOM2017 203 symbol. ISOM2000 205 Cave: Combined with 204 rocky pit to ISOM2017 203 Rocky pit or cave	ISSprOM 2019 Rocky pit or cave (203): a unique symbol is now used for both Rocky pit and cave instead of two symbols in ISSOM 2007. Similar to ISOM 2017. The length of the symbol has changed from 0.82 mm to 1.1 mm. A minimum depth has been added.	The OCAD symbol for rocky pits greater than 5m in diameter has a diameter of 2mm (ie 30 metres). This could cause issues, but very infrequently.	ISSprOM says the symbol should not be used in urban areas. This would happen infrequently on existing maps. The width of the top of the V increases from 0.82m to 1.1mm.	A change, but rare.
204	Boulder	No graphical change.	ISSprOM 2019 Boulder (204): the minimum height has been removed.	ISOM introduces a requirement for boulders drawn at different size to be within 30m of each other. If the rock is well mapped on an existing map, it hardly seems worth the effort of changing the size of boulders on maps that are used for NSW events only.	Boulders under 1.0m can now be mapped.	Removal of minimum height necessitates a field check.
205	Large boulder	No graphical change.	-	Comment above applies to large boulders also.	-	-
206	Gigantic boulder	-	ISOM2017 gigantic boulder 206 has been inserted	ISSprOM 2019 Gigantic boulder or rock pillar (206): minimum dimensions have been added.	-	-
207	Boulder cluster	No graphical change.	ISSprOM 2019 Boulder cluster (207): this symbol has been added. Similar to ISOM 2017.	Comment relating to boulders applies to boulder clusters also.	-	Field check as it is a new symbol.

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208 209	Boulder field Dense boulder field	ISOM2017 208-209: Specifying maximum and minimum densities and introducing two densities - one for runnable boulder fields and the other for boulder fields with reduced runnability. Reason: Emphasize that this is an area symbol and add a variant that shows reduced runnability. Added symbol: Distinguish boulder fields with reduced runnability. No graphical change to the triangle.	ISSprOM 2019 Boulder field (208): A minimum of two triangles shall be used. Similar to ISOM 2017.	If the rock is well mapped it is probably not worth the effort of updating to two boulder field symbols. At least on maps that are only used for NSW events.	-	-

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210-212	Stony ground	ISOM2017 210-212: Specifying maximum and minimum densities and introducing three levels of runnability for stony ground, corresponding to the runnability classification defined in paragraph 2.3. Reason: Emphasize that this is an area symbol that shall communicate reduced runnability. Added symbols: Represent runnability of stony ground in the same way as for vegetation.		If the terrain has run stony ground it is OK to exceed min distance for slow run stony ground. But the spacing needs to be consistent across the map.		-
213	Sandy ground		ISSprOM 2019 Open sandy ground (213): A minimum width (0.3mm) and a minimum area have been added (1mm ²).	A minimum area requirement has been introduced.		Field check min size introduced.

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214	Bare rock	Black percentage adjusted from 30% to 25%.	ISSprOM 2019 Bare rock (214): Colour has been changed to Black 30% A minimum width (0.25mm) and minimum area have been added (1mm ²).	A minimum area requirement has been introduced. Smaller areas on existing maps are probably rare.	Smaller areas on existing maps are probably rare. The 30% screen makes it much easier to differentiate bare rock from a canopy (which is 20% and has a line around it).	Symbol converted to 30% screen. Field check min size introduced.
215	Trench	ISOM2017 Trench 215 has been added. Added symbol: Useful for representing war-time trenches (request from Finland and experiences from WOC 2014 Italy, middle distance terrain)	-	A few maps might have trenches, most likely shown as erosion gullies or embankments. These would need to be field worked at the next major update.		-

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301	Uncrossable body of water	<p>ISOM2000 Uncrossable River (304) has been deleted and is now included in the ISOM2017 301 symbol.</p> <p>ISOM2000 304 Uncrossable river: Application of ISOM2017 301.</p>	<p>ISSprOM 2019 Uncrossable body of water (301): new name for ISSOM 2017 Impassable body of water. Colour has been changed to blue 100% or 70% for dominant areas. Similar to ISOM 2017.</p> <p>A minimum width has been added, and the minimum area reduced to 0.5 mm².</p> <p>The mention forbidden to cross has been removed.</p>	<p>Minimum sizes have been added, some existing maps might have features drawn smaller than this.</p> <p>It's not entirely clear how to map an impassable area of water that may sometimes be dry or passable. If this makes a major difference, eg a major reservoir where the water level can be tens of metres lower than the full level, the map should show the water and shore level as it is shortly before the event.</p> <p>Tidal zones. Beaches – no line between the sand and water. For areas that are crossable only at low tide – rock shelves, mud flats – use text to indicate this.</p>	<p>It's not uncommon for land owners to tell orienteering or the general public that a passable body of water cannot be crossed. This can be for safety, environmental or property damage reasons. It is not clear whether the IOF wants such bodies of water to be shown as an Area that shall not be entered (520 olive green). It is more logical to use the Uncrossable body of water symbol.</p>	Field check min size introduced.
302	Shallow body of water	<p>ISOM2017 301-302: Alignment with ISSOM by introducing a signature for shallow water.</p> <p>ISOM2000 302 Pond: Application of 302.</p> <p>Added symbol: Alignment with ISSOM.</p>	<p>ISSprOM 2019 Crossable body of water (302): new name for ISSOM 2017 Passable body of water. A minimum width has been added.</p>	New symbol.	-	-
303	Water hole	-	<p>ISSprOM 2019 Water hole (303): The length of the symbol has changed from 0.82 mm to 1.1 mm.</p>	-	-	After symbol conversion check gaps around symbol.

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304	Crossable watercourse	Thicker line (0.25->0.30)		Some crossable watercourse symbols might need to be widened or narrowed.	No symbol. Show to scale using crossable water symbol.	-
305	Small crossable watercourse	Thicker line (0.14->0.18)	ISSprOM 2019 Small crossable watercourse (305): new name for ISSOM 2017 Passable small watercourse. A minimum length has been added. Similar to ISOM 2017.	Line width increases from 0.14 to 0.18mm.	-	Check for symbols that breach new min length.
306	Minor / seasonal watercourse	Thicker line (0.14->0.18)	ISSprOM 2019 Minor/seasonal watercourse (306): new name for ISSOM 2017 Minor watercourse. A minimum two dashes length has been added. Similar to ISOM 2017.	Line width increases from 0.14 to 0.18mm.	-	Check for symbols that breach new min length.
307	Uncrossable marsh	No graphical change.	ISSprOM 2019 Uncrossable marsh (307): new name for ISSOM 2017 Impassable marsh Similar to ISOM 2017. A minimum two lines width has been added. The mention forbidden to cross has been removed.	- This symbol should also be used for marshes that must not be crossed for environmental reasons, eg mangroves, sphagnum bogs. If this is done the black line must be covered with 708 Out of bounds boundary. Competitors need to be made aware that the symbol means out of bounds.	- This symbol should also be used for marshes that must not be crossed for environmental reasons, eg mangroves, sphagnum bogs. If this is done competitors need to be made aware that the symbol means out of bounds.	Field check - environmental marsh out of bounds changes and new minimum size requirements.

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308	Marsh	No graphical change.	ISSprOM 2019 Marsh (308): the structure of the symbol has changed. Line width is now 0.12mm and spacing 0.38. A minimum two lines width has been added.	-	-	Check for relationship with nearby symbols and field check min size.
309	Narrow marsh	Dots closer (0.5->0.45)	ISSprOM 2019 Narrow marsh (309): a minimum two dots length has been added.	Gap between dots changes from 0.5mm to 0.45mm.	It's pretty unlikely that there are any narrow marshes with only one dot.	-
310	Indistinct marsh	No graphical change.	ISSprOM 2019 Indistinct marsh (310): the structure of the symbol has changed. Line width is now 0.12mm and spacing 0.38. Dash length is now 1.0 mm and dash spacing 0.35mm.	-	- rarely used symbol.	-
311	ISOM: Well, fountain or water tank ISSprOM: Small fountain or well	ISOM2017 is now using a square in order to avoid issue with the green circle for colour vision impaired runners.	ISSprOM 2019 Small fountain or well (311): the symbol is now a square. Similar to ISOM 2017.	In Australia, water tanks would need to be free standing to be shown. Some maps show water tanks as black dots. Given black dots have a smaller footprint than the 311 square symbol, this can be OK going forward on NSW maps that have water tanks close together.	The symbol does not include water tanks. Australian sprint maps usually show water tanks as buildings. Finding any small fountains or wells between 0.5 and 1.0m in height would need a field check.	Field check due to change in minimum height.

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312	Spring	-	ISSprOM 2019 Spring (312): The size of the symbol has changed from 0.95 mm in length to 1.2 mm in length and 0.6 mm in height.	The U becomes wider.		Check gaps around converted symbol.
313	Prominent water feature	-	ISSprOM 2019 Prominent water feature (313): the symbol is now an asterisk. Similar to ISOM 2017.	The asterisk symbol is marginally larger than the X, so cartographers might need to check impact on nearby symbols. Point features on should be: <ul style="list-style-type: none"> consistently prominent few in number (unless other features are lacking); definable; and fixed in the terrain. 	Point features, particularly on sprint maps, should be: <ul style="list-style-type: none"> consistently prominent few in number (unless other features are lacking); definable; and fixed in the terrain. 	Field check to ensure point feature principles are applied.
401	Open land	No graphical change. Yellow percentages have been adjusted, so that there is a decrease in yellow percentage from 401 to 404, according to runnability and openness.	ISSprOM 2019 Open land (401): A minimum width and a minimum area have been added. Yellow percentages have been adjusted, so that there is a decrease in yellow percentage from 401 to 404, according to runnability and openness.	Adding a prominent tree or bush to Open land with scattered trees (402) is specifically allowed. This is not the case for Open land (401). ONSW believes it is OK to add a single prominent tree/bush or more than one widely separated trees or bushes to Open Land on NSW maps.	Adding a prominent tree or bush to Open land with scattered trees (402) is specifically allowed. This is not the case for Open land (401). ONSW believes it is OK to add a single prominent tree/bush or more than one widely separated trees or bushes to Open Land on NSW maps. Areas of bark mulch have often been mapped with Rough open land; these should change. Artificial grass is mapped using this symbol.	Field check for minimum areas and areas of bark mulch mapped as rough open and for minimum area.

ISOM 2017 Symbol No	Symbol name	ISOM to ISOM 2017 - IOF	ISSOM to ISSprOM - IOF	ISOM to ISOM 2017 - ONSW	ISSOM to ISSprOM - ONSW	ISSprOM conversion
402	Open land with scattered trees	<p>ISOM2017 402 and 404: 402 inverted, and the holes can now be white or green – colour percentages adjusted. Reason: Consistency in the representation, demand for green dots to be able to show areas with patches of dense / less runnable vegetation in a generalised way.</p> <p>402 has been inverted to align it with 404 (that has the same kind of semantics).</p> <p>For 402 and 404, it is now allowed to use green instead of white in the holes.</p>	<p>ISSprOM 2019 Open land with scattered trees (402): The structure of the symbol is the same as in ISOM 2017: yellow with holes of white or green 60%. The diameter of the holes is now 0.6 mm and the spacing 0.75 mm. A minimum width and a minimum area have been added.</p>	<p><i>Open land with scattered bushes</i> An area denoted with this symbol offers better runnability than typical open forest. This is calculated point to point, not over distance travelled.</p> <p>Usually, green is associated with slow running.</p> <p>Please use this symbol sparingly. Consider using other symbols or mapping the bushes/thickets separately. As the symbol has been used infrequently, ensure it is shown on legend.</p>	<p><i>Open land with scattered bushes</i> An area denoted with this symbol offers better runnability than typical open forest. This is calculated point to point, not over distance travelled.</p> <p>Usually, green is associated with slow running.</p> <p>Please use this symbol sparingly. Consider using other symbols or mapping the bushes/thickets separately. As the symbol has been used infrequently, ensure it is shown on legend.</p>	Field check for open land with scattered bushes, which is a new symbol and for minimum area.
403	Rough open land	No graphical change.	ISSprOM 2019 Rough Open land (403): A minimum area has been added.	ISOM 2017 added a minimum area specification.		Field check for minimum areas.

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404	Rough open land with scattered trees	ISOM2017 402 and 404: 402 inverted, and the holes can now be white or green – colour percentages adjusted. Reason: Consistency in the representation, demand for green dots to be able to show areas with patches of dense / less runnable vegetation in a generalised way.	ISSprOM 2019 Rough open land with scattered trees (404): The structure of the symbol is the same as in ISOM 2017: yellow 50% with holes of white or green 60%. The diameter of the holes is now 0.8 mm and the spacing 1 mm.	<p><i>Rough open land with scattered bushes</i></p> <p>An area denoted with this symbol offers the same runnability as typical open forest. This is calculated point to point, not over distance travelled.</p> <p>Usually, green is associated with slow running.</p> <p>Please use this symbol sparingly. Consider using other symbols or mapping the bushes/thickets separately. As the symbol has been used infrequently, ensure it is shown on the legend.</p>	<p><i>Rough open land with scattered bushes</i></p> <p>An area denoted with this symbol offers the same runnability as typical open forest. This is calculated point to point, not over distance travelled.</p> <p>Usually, green is associated with slow running.</p> <p>Please use this symbol sparingly. Consider using other symbols or mapping the bushes/thickets separately. As the symbol has been used infrequently, ensure it is shown on the legend.</p>	Field check for rough open land with scattered bushes, which is a new symbol and for minimum area.
405	Forest	No graphical change.	ISSprOM 2019 Forest (405): new name for ISSOM 2007 Forest: easy running. Similar to ISOM 2017. A minimum width and a minimum area for openings have been added. Similar in principle to ISOM 2017.			Field check for minimum width and size – where white is bordered by other colours.

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406	Vegetation: slow running	<p>The green percentages of 406 and 408 have been changed back to the ISOM1990 values of 20% green and 50% green respectively to restore the logic of the ISOM.</p> <p>ISOM2000 411 Forest runnable in one direction: Application of 406, 408 and 410.</p> <p>It has been recognised that the green impression (% green) for 407 and 409 needs to be consistent with 406, 408 and 410. That meant that 409 has been made denser and 406 and 408 have been adjusted to 20% and 50% green (as in the ISOM1990). I believe this was reversed.</p>	<p>ISSprOM 2019 Vegetation: slow running (406): new name for the ISSOM 2007 Forest: slow running symbol. The minimum width has been increased to 0.4 mm and a minimum area has been added.</p> <p>The symbol includes now as an option the ISSOM 2007 Forest runnable in one direction (411) symbol.</p>	Minimum area introduced.	Minimum area introduced and minimum width increased.	Field check for minimum area & width.

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407	Vegetation, slow running, good visibility	-	ISSprOM 2019 Vegetation: slow running, good visibility (407): new name for the ISSOM 2007 Undergrowth: slow running symbol. Similar to ISOM 2017. A minimum width of 2 lines has been added.	Minimum area has been added.	Minimum height has been added.	Field check on minimum width.
408	Vegetation: walk	The green percentages of 406 and 408 have been changed back to the ISOM1990 values of 20% green and 50% green respectively to restore the logic of the ISOM.	ISSprOM 2019 Vegetation: walk (408): new name for the ISSOM 2007 Forest: difficult to run symbol. The minimum width has been increased to 0.4 mm and a minimum area has been added. The symbol includes now as an option the ISSOM 2007 Forest runnable in one direction (411) symbol.	Minimum area has been added. There is a discrepancy in the minimum width of the symbol. Use 0.4mm.	Minimum area has been added. The minimum width of the symbol has increased to 0.4mm.	Field check on minimum area and width.

ISOM 2017 Symbol No	Symbol name	ISOM to ISOM 2017 - IOF	ISSOM to ISSprOM - IOF	ISOM to ISOM 2017 - ONSW	ISSOM to ISSprOM - ONSW	ISSprOM conversion
409	Vegetation: walk, good visibility	ISOM2017 406-409: The vertical line screen of symbol 409 has been made denser (from 28.6% to 40%) to give a green impression that corresponds better with the runnability (shall correspond to 408). Reason: Make the greens consistent with respect to runnability and green percentage.	ISSprOM 2019 Vegetation: walk, good visibility (409): new name for the ISSOM 2017 Undergrowth: difficult to run symbol. A minimum width of 2 lines has been added.	Line width increases from 0.12 to 0.14mm.	Line width increases from 0.12 to 0.14mm.	Field check minimum width.

410	Vegetation: fight (ISOM) Impassable vegetation (ISSprOM)	No graphical change.	<p>ISSprOM 2019 Impassable vegetation (410): cover the use of previous both ISSOM 2007 Vegetation, very difficult to run (410) and ISSOM 2007 Impassable vegetation (421) using the ISSOM 2007 Vegetation, very difficult to run green 100% symbol (410). <i>See NSW comments.</i></p> <p>The minimum width has been increased to 0.4 mm and a minimum area has been added.</p> <p>The previous ISSOM 2007 Impassable vegetation symbol (421) using green 100% and black 50% has been removed as it often appeared too blackish at printing.</p> <p>For Impassable vegetation the mention forbidden to pass has been removed.</p>		<p>There is not a symbol in ISSprOM for Fight vegetation (1-20% of normal running speed).</p> <p>Solutions include:</p> <ul style="list-style-type: none"> • Show Fight terrain with the Walk symbol. This works well if the only areas of Walk or Fight are small enough that all runners would choose to run around them. It means organisers don't need to police areas of fight where competitors might cut through. Legend Walk/fight. • Show fight vegetation with the Impassable vegetation symbol. For major events, this used of the symbol should be specifies in event information and organisers might need to police areas of fight where competitors might cut through. Legend Fight/impassable (do not enter). <p>The sprint symbol for impassable vegetation should only be used for vegetation that is predominantly impassable. It should be used for hedges. Legend: hedge. It is not meant to be used for gardens.</p> <p>ISSprOM allows runnable in one directional forest stripes. On a sprint map, it would be better to actually where gaps are.</p>	Will need field checking.
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ISOM 2017 Symbol No	Symbol name	ISOM to ISOM 2017 - IOF	ISSOM to ISSprOM - IOF	ISOM to ISOM 2017 - ONSW	ISSOM to ISSprOM - ONSW	ISSprOM conversion
412	Cultivated land	No graphical change.	ISSprOM 2019 Cultivated land (412): the mention seasonally out of bounds has been removed from the name. If the cultivated land shall not be entered it has to be combined with the symbol Out of bounds area (709) as for ISOM 2017. A minimum area has been added.	-	-	No change to symbol.
413	Orchard	Orchard and vineyard symbols can now be implemented using also 50 % yellow (rough open). Less runnable orchards can now be represented using an undergrowth symbol. No graphical change (except for allowing light yellow and green stripes).	ISSprOM 2019 Orchard (413): the structure of the symbol has changed. Green dots are now 0.68 in diameter with a spacing of 1.2 mm. The background can be either yellow or yellow 50%. A minimum width and a minimum area have been added.			Field check for whether to use open land or rough open land and for minimum width and size.

ISOM 2017 Symbol No	Symbol name	ISOM to ISOM 2017 - IOF	ISSOM to ISSprOM - IOF	ISOM to ISOM 2017 - ONSW	ISSOM to ISSprOM - ONSW	ISSprOM conversion
414	Vineyard or similar	No graphical change (except for allowing light yellow).	ISSprOM 2019 Vineyard or similar (414): new name for ISSOM Orchard, one direction symbol. The structure of the symbol has changed with green dash line 0.3 mm in width, 1.3 mm in spacing and 2.0 mm in length. The background can be either yellow or yellow 50%. A minimum width and a minimum area have been added.	-	-	Field check for whether to use open land or rough open land and for minimum width and size.
415	Distinct cultivation boundary	No graphical change.	ISSprOM 2019 Distinct cultivation boundary (415): the line width has been increased to 0.1mm. A minimum length has been added.		Generally used for distinct boundaries between different types of manmade vegetation types. ISSprOM lists Open land, cultivated land, orchards and vineyards. On NSW sprint maps manmade vegetation can also include Open land with scattered trees, Rough open land, Rough open land with scattered trees and Area that shall not be entered (eg private areas, garden beds).	Field check to see if symbol is correctly used.

ISOM 2017 Symbol No	Symbol name	ISOM to ISOM 2017 - IOF	ISSOM to ISSprOM - IOF	ISOM to ISOM 2017 - ONSW	ISSOM to ISSprOM - ONSW	ISSprOM conversion
416	Distinct vegetation boundary	<p>ISOM2017 416 distinct vegetation boundary could also use a green dashed line. This green dashed line solution is recommended for maps with a lot of rock features. However only one representation shall be used on a single map: either black dotted line or green dashed line, but not both.</p> <p>An alternative graphical implementation (thin green line) for distinct vegetation boundary is introduced. The green line is a better alternative for areas of much rock, as the dotted black line is very difficult to understand when there is a lot of black on the map.</p>	Dots closer (0.5->0.45)	A deliberate choice would be needed to choose the new green line symbol.	-	Field check minimum length.

ISOM 2017 Symbol No	Symbol name	ISOM to ISOM 2017 - IOF	ISSOM to ISSprOM - IOF	ISOM to ISOM 2017 - ONSW	ISSOM to ISSprOM - ONSW	ISSprOM conversion
417	Prominent large tree	ISOM2000 419 green circle and 420 green dot are now specified as prominent large tree ISOM2017 417 and prominent bush or tree ISOM2017 418, in order to be consistent with ISSOM2010. Symbol footprint is larger.	ISSprOM 2019 Prominent large tree (417): the green circle diameter has been increased to 1.0 mm. A 1.2 mm diameter white mask is used under the green circle to improve the readability in yellow and green.	If the tree is prominent because it is a particular type, this should be included on the map legend.	If the tree is prominent because it is a particular type, this should be included on the map legend.	Eye check map for gaps to other symbols - symbol has increased in size.
418	Prominent bush or tree	See 417. ISOM2000 418-420 - > ISOM2017 417 Prominent big tree and ISOM2017 418 Prominent bush or tree and ISOM2017 419 Prominent vegetation feature x: Align with ISSOM. No graphical change.	ISSprOM 2019 Prominent bush or small tree (418): the symbol has changed to a 0.8 mm circle with a 0.2 mm white mask inside to aid the colour vision impaired.	A 0.2mm white dot has been added to the inside to aid the colour vision impaired.		Field check for any large trees with a trunk less than 0.5m diameter that were shown with a dot. Eye check map for gaps to other symbols - symbol has increased in size.
419	Prominent vegetation feature	Green cross to assist colour vision impaired orienteers.		Used for root stocks, stumps, etc. Take care as these features come and go. Point features should be: <ul style="list-style-type: none"> consistently prominent few in number (unless other features are lacking); definable; and fixed in the terrain. 	Used for root stocks, stumps, etc. Take care as these features come and go. Point features, particularly on sprint maps, should be: <ul style="list-style-type: none"> consistently prominent few in number (unless other features are lacking); definable; and fixed in the terrain. 	Eye check map for gaps to other symbols - symbol has increased in size.

ISOM 2017 Symbol No	Symbol name	ISOM to ISOM 2017 - IOF	ISSOM to ISSprOM - IOF	ISOM to ISOM 2017 - ONSW	ISSOM to ISSprOM - ONSW	ISSprOM conversion
501	Paved area	[Added] to align with ISSOM. ISOM2000 501-503 Roads -> ISOM2017 502 Wide road: These are applications. No graphical change.	ISSprOM 2019 Paved area (501): the difference between urban and non-urban areas that existed in ISSOM 2007 for symbol Paved area (529) has been deleted as it was difficult to agree between mappers on what exactly was an non-urban area. Two levels of brown still has to be considered for paved areas but based on the differences in the traffic of vehicles or pedestrians. 30% brown is used for light traffic whereas 50% brown is used for heavy traffic.	Black boundary line added where the paved area has a distinct boundary. Minimum size added.	<p>For safety reasons, the distinction between paved area colours is best drawn at:</p> <ul style="list-style-type: none"> • Brown 30% = no cars or pedestrians have priority over cars. • Brown 50% = quiet roads, footpaths in busy shopping areas (eg where an orienteer is likely to be held up by, or have to continually dodge, pedestrians). I note that most NSW sprint events avoid times when there is busy pedestrian traffic. <p>Roads busy enough to have traffic lights or where an orienteer is likely to wait for a break in traffic should be mapped as out of bounds. Use the 709 Out-of-bounds area symbol. Setters would need to use an overpass, underpass or 'time out' controls.</p>	Field check to ensure difference between light and darker brown is correct.

ISOM 2017 Symbol No	Symbol name	ISOM to ISOM 2017 - IOF	ISSOM to ISSprOM - IOF	ISOM to ISOM 2017 - ONSW	ISSOM to ISSprOM - ONSW	ISSprOM conversion
501.1	Step or edge of paved area		ISSprOM 2019 Step or edge of paved area (501.1): the difference between urban and non-urban areas that existed in ISSOM 2007 for edge of paved area (529.1) has been deleted. There is now a unique width for the black border line which is 0.1mm for both step and edge	No ISOM symbol.	Black line width changes from 0.07mm (urban paved area, step) or 0.14mm (non-urban paved area) to 0.10mm.	Examine black lines in case change in width is untidy.

ISOM 2017 Symbol No	Symbol name	ISOM to ISOM 2017 - IOF	ISSOM to ISSprOM - IOF	ISOM to ISOM 2017 - ONSW	ISSOM to ISSprOM - ONSW	ISSprOM conversion
501.2	Paved area in multilevel structures		ISSprOM 2019 Paved area in multilevel structures (501.2): this is a new symbol created in order to make more readable simple multilevel structure like a bridge over a street. Don't forget to refer to paragraph 2.3 of ISSprOM 2019 when dealing with multilevel structures.	No ISOM symbol.	<p>Paragraph 2.3 of ISSprOM says: The main 'running' level of multilevel structures should be represented</p> <p>Multilevel structures such as bridges, canopies, underpasses or underground buildings are common in urban areas. The cartographic representation of more than one level is quite difficult. Hence only the main 'running' level should be represented on the map. However, underground passages (e.g. underpasses, lighted tunnels) or overpasses (e.g. bridges), which are important for the competitors should be represented on the map. For difficult situations of multilevel representations it is recommended to show it in the bulletin.</p> <p>ONSW: Don't be too ambitious. You only have one sheet of paper, so it's hard to map two or more levels and be able to sprint using the map.</p> <p>If you are not sure whether to map two levels, talk to other mappers or experienced orienteers.</p>	Add this symbol where is a tunnel or bridge on the map. The field check will need to find any multi-level areas and assess whether this symbol should be used.

ISOM 2017 Symbol No	Symbol name	ISOM to ISOM 2017 - IOF	ISSOM to ISSprOM - IOF	ISOM to ISOM 2017 - ONSW	ISSOM to ISSprOM - ONSW	ISSprOM conversion
501.3	Paved area with scattered trees		ISSprOM 2019 Paved area with scattered trees (501.3): this is a new symbol very similar in principle to symbols 402 or 404 Open land with scattered trees / Rough open land with scattered trees.	No ISOM symbol.		The field check will need to find and map any paved areas with scattered trees.
502	Wide road	[Added] to align with ISSOM. In order to align with ISSOM a few symbols have been added This had led to the deletion of the ISOM2000 Motorway (501) and Major Road (502) symbols which are now included in the ISOM2017 502 symbol.			Uses paved area symbol for roads.	na
503	Road	No graphical change.			Uses paved area symbol for roads.	na
504	Vehicle track	ISOM2000 visible path junction and 511 Indistinct junction are deleted and now included in the 504-506 ISOM2017 symbols. No graphical change.			Uses paved area symbol for vehicle tracks.	na

ISOM 2017 Symbol No	Symbol name	ISOM to ISOM 2017 - IOF	ISSOM to ISSprOM - IOF	ISOM to ISOM 2017 - ONSW	ISSOM to ISSprOM - ONSW	ISSprOM conversion
505	ISOM: Footpath ISSprOM: Unpaved footpath or track	No graphical change.	ISSprOM 2019 Unpaved footpath or track (505): the difference between urban and non-urban areas that existed in ISSOM 2007 for symbol Unpaved footpath or track (506.1) has been deleted. The width of the black border line has been increased to 0.1mm as for ISSprOM symbol Step or edge of paved area (501.1). A minimum two dashes length has been added.	Minimum length of two dashes introduced.		Check brown colour, black line width and minimum length. Field check due to safety changes to colour of pavements (see 501 above).
506	Small footpath	No graphical change.	ISSprOM 2019 Small unpaved footpath or track (506): the exclusion of urban areas has been removed. The structure of the symbol has changed. Line width is now 0.27, dash length 1.5 mm and dash spacing 0.37 mm. A minimum two dashes length has been added.	Minimum length of two dashes introduced.	The distinct versus indistinct track junction convention in ISOM should be used. Small bridges connected to a small footpath can be shown by centring a track dash on the crossing. A small footpath is broken for water course crossings without bridges.	Field check to see if there are unmapped small footpaths or tracks in urban areas. Can also check for features that are shorter than minimum length. Symbol size has increased so a visual check of map might be needed.

ISOM 2017 Symbol No	Symbol name	ISOM to ISOM 2017 - IOF	ISSOM to ISSprOM - IOF	ISOM to ISOM 2017 - ONSW	ISSOM to ISSprOM - ONSW	ISSprOM conversion
507	Less distinct small footpath	No graphical change.	ISSprOM 2019 Less distinct small path (507): the exclusion of urban areas has been removed. The structure of the symbol has changed. Line width is now 0.27, dash length 1.5 mm and dash spacings 0.37 mm and 1.5mm. A minimum two sections of double dashes length has been added.	Minimum length of two sections of double dashes added. While the distinct and indistinct junction requirement does not formally apply, when updating the symbols the cartographer should check to see if junctions are affected by the change in large gap length.	The distinct versus indistinct track junction convention in ISOM should be used if possible. Small bridges connected to a small footpath can be shown by centring a track dash on the crossing. A small footpath is broken for water course crossings without bridges.	Field check to see if there are unmapped less distinct small footpaths or tracks in urban areas. Can also check for features that are shorter than minimum length. Symbol size has increased so a visual check of map might be needed.

ISOM 2017 Symbol No	Symbol name	ISOM to ISOM 2017 - IOF	ISSOM to ISSprOM - IOF	ISOM to ISOM 2017 - ONSW	ISSOM to ISSprOM - ONSW	ISSprOM conversion
508	Narrow ride or linear trace through the terrain	<p>ISOM2017 508 Narrow ride includes now a colour background to indicate runnability.</p> <p>ISOM2000 509 Narrow ride -> ISOM2017 508 Narrow ride or linear trace through the terrain: Allow this symbol to be used also for traces over open areas (often caused by forestry machines). This symbol can be combined with lines of different colour to indicate runnability. Dashes shorter (3.0->2.0) and gaps shorter (0.5->0.25)</p>	ISSprOM 2019 Narrow ride (508): the exclusion of urban areas has been removed. The structure of the symbol has changed. Line width is now 0.21, dash length 4.5 mm and dash spacing 0.75mm. A minimum two dashes length has been added.	-	A ride in an urban area is pretty unlikely, so this change should not cause much work.	Field check as rides in urban areas and min length introduced.
ISOM 509 ISSprOM 509.1 509.2	Railway Railway Tramway	ISOM2017 509 Railway was made consistent with ISSOM2000		Tramways on streets are not shown on an ISOM map.		No change.

ISOM 2017 Symbol No	Symbol name	ISOM to ISOM 2017 - IOF	ISSOM to ISSprOM - IOF	ISOM to ISOM 2017 - ONSW	ISSOM to ISSprOM - ONSW	ISSprOM conversion
510	Power line, cableway or skilift	No graphical change.	ISSprOM 2019 Power line, cableway or skilift (510): a minimum length including two pylons has been added.	Min length added. <i>Should also be omitted if they can't be seen by a competitor running underneath the power line, etc. If lines are omitted, the legend or event information might need to explain why power lines suddenly stop on the map.</i>	Instead of using this symbol, sprint maps can show the poles or pylons with the prominent man made feature symbol. <i>Should also be omitted if they can't be seen by a competitor running underneath the power line, etc. If lines are omitted, the legend or event information might need to explain why power lines suddenly stop on the map.</i>	Eye check for min length.
511	Major power line		ISSprOM 2019 Major power line (511): Both symbols Building (521) or High tower (524) can be used for representing very large carrying masts.			Field check for possible changes to how pylons are shown.

ISOM 2017 Symbol No	Symbol name	ISOM to ISOM 2017 - IOF	ISSOM to ISSprOM - IOF	ISOM to ISOM 2017 - ONSW	ISSOM to ISSprOM - ONSW	ISSprOM conversion
ISOM 512 ISSprOM 512.1 512.2	Bridge / tunnel Bridge Underpass or tunnel	ISOM2017 512 Bridge/Tunnel, the same symbol is now used for bridge and tunnel ISOM2000 518 (Tunnel) is deleted. ISOM2000 512-514 (footbridge and crossing points) are also deleted and the dash drawing is included in the ISOM2017 512 symbol. No graphical change to the wide variant of tunnel.	ISSprOM 2019 Bridge (512.1): the line width has been increased to 0.4 and the endings at 0.6 mm. The use of symbol Crossing points (710.1) or Crossing sections (710.2) is mentioned, like in symbol Underpass or tunnel (512.2)	Changes – the small tunnel symbol no longer should be replaced by the wide variant.	If you can run both under and over a bridge, the Paved area in multilevel structures (501.2) symbol can be used if there is space. There are occasional issues with how to show stepping stones or logs across water. They might not be runnable for most people. How this is solved should be explained in event information or the legend. Don't draw a <i>Crossing point</i> (710.1) or <i>Crossing section</i> (710.2) symbol – leave the decision to use these symbols to course setters.	Eye check bridge symbol is larger. Field to check symbol is used correctly.

In general, an orienteer should be able to run both across a bridge and underneath it or through an underpass/tunnel and above it. If you can't, this should be obvious on the map. For example:

- omit the symbol (eg if it is difficult to go through a culvert);
- by using an adjacent uncrossable or out of bounds symbol (eg uncrossable water); or
- using the canopy symbol (eg road under a railway).

ISOM 2017 Symbol No	Symbol name	ISOM to ISOM 2017 - IOF	ISSOM to ISSprOM - IOF	ISOM to ISOM 2017 - ONSW	ISSOM to ISSprOM - ONSW	ISSprOM conversion
ISOM 513 ISSprOM 513.1 513.2	Wall Passable wall Passable retained wall	Dots closer (2.5->2)	ISSprOM 2019 Passable wall (513.1): new name for ISSOM 2007 Passable stone wall. A minimum length has been added. The ISSOM 2007 passable wall (519.1) which used a minimum 0.35 mm wide, 50% black colour line has been deleted, as it was quite difficult to read. ISSprOM 2019 Passable retained wall (513.2): this is a new symbol for passable wall which is seen only from one side.	Might need to field check to see if there are any significant walls built of concrete, wood or other materials. These probably weren't mapped using ISOM 2000's Stone wall symbol.	A major change that needs field work. Retained wall should be listed on legends as retaining wall. Each passable wall on an ISSOM map needs to be examined to see if: <ul style="list-style-type: none"> it is a retaining wall and which way it slopes (change to retained wall symbol); higher than 1.5m (change to impassable wall); if it is a retaining wall, it is lower than 0.6m (change to step); and it is longer than minimum length for isolated walls of 1.4mm (passable wall) or 2.4mm (retaining wall). Some walls might need to be drawn without a dot – due to shape, proximity to other features or if the wall is obvious but shorter than specification.	Most sprint maps will need a bit of field work. See changes in column to left.
514	Ruined wall	Dots closer (2.5->2) and gaps longer (0.25->0.35)				No symbol.
515	Impassable wall	Thicker line (0.18->0.25). Dots larger (0.5->0.6) and spacing increased (0.7->0.8 and 2.5->3.0)	ISSprOM 2019 Impassable wall (515): the mention forbidden to cross has been removed.	-		No change to symbol.

ISOM 2017 Symbol No	Symbol name	ISOM to ISOM 2017 - IOF	ISSOM to ISSprOM - IOF	ISOM to ISOM 2017 - ONSW	ISSOM to ISSprOM - ONSW	ISSprOM conversion
516	Fence		ISSprOM 2019 Passable fence or railing (516): a minimum length has been added.	Minimum length has been added. Tags closer (2.5->2) and shorter (0.5->0.4).	Some fences might need to be drawn without a tag – due to shape, proximity to other features or if the fence is obvious but shorter than specification.	Field check – min length.
517	Ruined fence	Tags closer (2.5->2) and gap increased (0.25->0.35)	-	-	No symbol	No symbol
518	Impassable fence	Thicker line (0.18->0.25).	ISSprOM 2019 Impassable fence or railing (518): the mention forbidden to cross has been removed. A minimum length has been added.	A minimum length has been added.		If length is less, than 3mm, use impassable wall symbol.
519	Crossing point	No graphical change.	ISSprOM 2019 Crossing point (519): the opening has been increased to 1.0 mm [and changed from CC to IM].	A closed crossing point symbol can be used for a gate that is <ul style="list-style-type: none"> normally closed and can be opened; is locked, but is an easy point to cross a fence. 	Crossing points are not usually shown on sprint map. A closed crossing point symbol can be used for a gate that is <ul style="list-style-type: none"> normally closed and can be opened; is locked, but is an easy point to cross a fence. 	Eye check – gap between lines widened.

ISOM 2017 Symbol No	Symbol name	ISOM to ISOM 2017 - IOF	ISSOM to ISSprOM - IOF	ISOM to ISOM 2017 - ONSW	ISSOM to ISSprOM - ONSW	ISSprOM conversion
520	Area that shall not be entered	ISOM2000 527 Settlement: ISOM2017 520 Area with forbidden access is an alternative.	ISSprOM 2019 Area that shall not be entered (520): new name for ISSOM 2007 Area with forbidden access. The mention forbidden to cross has been removed. A minimum width and a minimum area have been added. The area shall always be delineated by a boundary line.	Please follow ONSW Guidance for Mappers: Out-of-bounds Symbols – ISOM.	ISSprOM says: The area shall always be delineated by a boundary line (at least 0.1 mm in width). Most 520 areas in NSW have other features drawn at their edges; it is OK to do this. Mappers can also follow the ISOM specification that “if the border is unclear no black line shall occur”.	Field check for new minimum width and area.
521	Building	ISOM2017 521 building can use either black or black 65% for the inner colour to be consistent with the ISSOM2010. No graphical change to normal size buildings.	ISSprOM 2019 Building (521): the inline colour has been fixed to 60% black. The mention forbidden to pass through or over has been removed.			If using OCAD conversion process, you might need to redraw some buildings so there is only one black line.

ISOM 2017 Symbol No	Symbol name	ISOM to ISOM 2017 - IOF	ISSOM to ISSprOM - IOF	ISOM to ISOM 2017 - ONSW	ISSOM to ISSprOM - ONSW	ISSprOM conversion
522	Canopy	[Added] to align with ISSOM.	ISSprOM 2019 Canopy (522): the outline width has been increased to 0.1mm. A minimum width and a minimum area have been added.	-	<p>Canopies should be shown:</p> <ul style="list-style-type: none"> if there is a roof, even if it's very high or made of glass. if it looks like there is a canopy, eg an awning with an open slatted roof or a wisteria archway. <p>Canopies should not be shown if a roof covers an area that would normally be mapped as slower than open land, is out of bounds or there are numerous features that would normally map (eg under a motorway viaduct).</p>	Field check - minimum area and widths have been introduced. OCAD redrawing
522.1	Pillar	-	-	No symbol	ISSprOM allows decreases the size pillars that can be mapped. The min size decreased from 2x2m to 1x1m.	Field check for smaller pillars.
523	Ruin	Dash lengths specified (0.5). No graphical change to normal size ruins.	-		No symbol.	No symbol.
524	High tower	No graphical change.		Some ISOM 2000 towers might have a footprint large enough to be drawn as a building.		No change in symbol.
525	Small tower	Symbols that have been adjusted in size due to the outside measures specifications.	-	-		No change in symbol.

ISOM 2017 Symbol No	Symbol name	ISOM to ISOM 2017 - IOF	ISSOM to ISSprOM - IOF	ISOM to ISOM 2017 - ONSW	ISSOM to ISSprOM - ONSW	ISSprOM conversion
526	Cairn		ISSprOM 2019 Cairn, memorial, small monument or boundary stone (526): the circle diameter has been increased to 1.0 mm OM. [from 0.98mm]	No change	ISSprOM says the feature must be "obvious", ISSOM says it must "more than 0.5 m high". This change will rarely need specific field work.	Probably no change, see comment to left.
527	Fodder rack	Symbols that have been adjusted in size due to the outside measures specifications		It's not obvious what's different in the symbol size.		No change
528	Prominent line feature	ISOM2000 533-534 Pipelines -> ISOM2017 528-529 Prominent line features: Open up for other prominent line features. Spacing between arrowheads decreased (2.5->2)	ISSprOM 2019 Prominent line feature (528): new name for ISSOM 2007 Passable pipeline. A minimum length has been added.	Now includes other linear features apart from pipelines, eg a bobsleigh track.	Now includes other linear features apart from pipelines, eg a bobsleigh track.	Keep an eye out when field checking.
529	Prominent impassable line feature	Thicker line (0.18->0.25). Spacing decreased (2.5->2).	ISSprOM 2019 Prominent impassable line feature (528): new name for ISSOM 2007 Impassable pipeline. The mention forbidden to cross has been removed. A minimum length has been added.	Now includes other linear features apart from pipelines, eg a bobsleigh track.	Now includes other linear features apart from pipelines, eg a bobsleigh track.	Keep an eye out when field checking.

ISOM 2017 Symbol No	Symbol name	ISOM to ISOM 2017 - IOF	ISSOM to ISSprOM - IOF	ISOM to ISOM 2017 - ONSW	ISSOM to ISSprOM - ONSW	ISSprOM conversion
530	Prominent man-made feature - ring	Symbols that have been adjusted in size due to the outside measures specifications	ISSprOM 2019 Prominent man-made feature-ring (530): the circle diameter has been increased from 0.98mm to 1.0 mm OM.	It's not obvious what's different in the symbol size. Assume size has increased. Point features should be: <ul style="list-style-type: none"> consistently prominent few in number (unless other features are lacking); definable; and fixed in the terrain. 	Point features, particularly on sprint maps, should be: <ul style="list-style-type: none"> consistently prominent few in number (unless other features are lacking); definable; and fixed in the terrain. 	Probably no action – increase in diameter is only 0.02mm.
		ISOM2000 Firing range 531 has been deleted. ISOM2000 531 Firing range: Could use forbidden area if in use.		Map the firing range with appropriate symbols (if it is rarely in use) or as an Area that shall not be entered (olive green). If there is space include "Firing range" or similar as text.	No symbol.	No symbol.
531	Prominent man-made feature - x	Symbols that have been adjusted in size due to the outside measures specifications		It's not obvious what's different in the symbol size. Assume size has increased. Point features should be: <ul style="list-style-type: none"> consistently prominent few in number (unless other features are lacking); definable; and fixed in the terrain. 	No change Point features, particularly on sprint maps, should be: <ul style="list-style-type: none"> consistently prominent few in number (unless other features are lacking); definable; and fixed in the terrain. 	No change in symbol.

ISOM 2017 Symbol No	Symbol name	ISOM to ISOM 2017 - IOF	ISSOM to ISSprOM - IOF	ISOM to ISOM 2017 - ONSW	ISSOM to ISSprOM - ONSW	ISSprOM conversion
532	Stairway		ISSprOM 2019 Stairway (532): this is a new symbol to be used instead of drawing multiple steps using ISSprOM 2019 symbol Step or edge of paved area (501.1).	<p>New symbol.</p> <p>Stairways mostly occur in urban areas. The ISOM symbol is relatively large – if it does not fit in, it can be omitted and the relevant path symbol can be used.</p> <p>If the map is only used for minor events, the mapper can decide to omit stairways from the map.</p> <p>See also ONSW comments on stairways in ISSprOM.</p>	<p>A stairway might have an actual footprint of 1m wide x 0.5m long. The minimum footprint of an ISSprOM stairway is 2.4m wide x 6.4m long.</p> <p>Stairways need to be drawn to specification in terms of width to be legible. This isn't the case for length – in NSW it is OK to have a stairway with only one graphical step shown (step line, 0.4mm gap, step line).</p> <p>The infill for a stairway is not specified. The infill can be in order of frequency of use: paved area (30 or 50%), canopy, open land, Area that shall not be entered (olive green).</p> <p>It's possible to run across a stairway at right angles. If this case, the 0.1mm step line should be used. Otherwise, use the most relevant symbol, eg impassable wall. If a stairway goes up or down to an unmapped level, use an impassable wall to end the stairway.</p>	Some tidying up of stairways might be necessary before or after the conversion.

ISOM 2017 Symbol No	Symbol name	ISOM to ISOM 2017 - IOF	ISSOM to ISSprOM - IOF	ISOM to ISOM 2017 - ONSW	ISSOM to ISSprOM - ONSW	ISSprOM conversion
532	Grave	ISOM2000 Grave 532 has been deleted. ISOM2000 532 Grave: Problematic with religious connotations.		If single grave symbols are used either replace them with one of the Prominent man-made feature symbols or don't show the grave on the map. If grave symbols are used to denote a cemetery, map the cemetery with appropriate symbols or as an Area that shall not be entered (olive green). If there is space include "Cemetery" as text.	No symbol.	No symbol.
601	Magnetic north line	ISOM2017 601: The distance between the magnetic north lines has been adjusted so that it will be reasonable when enlarged to 1:10000. Reason: Larger scale maps shall be strict enlargements.		If the map is not 1:10,000 but has 1:10,000 symbol sizes, the magnetic north lines should be 30mm apart. If the map uses enlarged or reduced symbol sizes, the gap between magnetic north lines will be enlarged or reduced proportionately (in line with ISOM 2017).	If the map is not 1:4,000 but has 1:4,000 symbol sizes, the magnetic north lines should be 30mm apart. If the map uses enlarged symbol sizes, the gap between magnetic north lines will be enlarged proportionately.	
602	Registration mark	No graphical change.	ISSOM 2007 Registration marks (602) has been removed	Registration marks are obsolete on digitally printed maps.		No symbol.
603	Spot height	No graphical change.	ISSOM 2007 Spot height (603) has been removed	ISOM maps with spot heights could be checked to see if the font is as specified.		No symbol.

ISOM 2017 Symbol No	Symbol name	ISOM to ISOM 2017 - IOF	ISSOM to ISSprOM - IOF	ISOM to ISOM 2017 - ONSW	ISSOM to ISSprOM - ONSW	ISSprOM conversion
708	Out-of-bounds boundary	No graphical change.	ISSprOM 2019 Out of bounds boundary (708): new name for ISSOM 2007 Uncrossable boundary. The mention forbidden to cross has been removed. Line width has been increased from 0.7mm to 1.0 mm	See also ONSW Guidance for Mappers: Out-of-bounds Symbols – ISOM.	“It shall be used for temporary uncrossable boundaries used for the course setting” is new to the Specification.	Eye check – wider line.
709	Out-of-bounds area		ISSprOM 2019 Out of bounds area (709): The structure of the symbol as changed. It is now similar to the one used in ISOM 2017. The mention forbidden to cross has been removed	Symbol changes from vertical stripes to cross hatch. ONSW’s Guidance for Mappers: Out-of-bounds Symbols –ISOM does not elaborate on ISOM in regard to 709.	Symbol changes from vertical stripes to cross hatch.	Eye check - min areas.
710	Dangerous area	ISOM2000 710 Dangerous area: Dangerous areas must be forbidden, so there should be no use for this symbol. Use ISOM2017 709 forbidden area. Align with ISSOM.		Future organisers & course setters need to be aware the area is dangerous	The Sprint Specifications do not have a symbol for dangerous ground.	No symbol.
710	Crossing point	No graphical change.	ISSprOM 2019 Crossing point (710.1): the opening has been widened to 1.0 mm IM		The minimum distance between the brackets might have change.	Eye check – gap between lines has increased.

ISOM 2017 Symbol No	Symbol name	ISOM to ISOM 2017 - IOF	ISSOM to ISSprOM - IOF	ISOM to ISOM 2017 - ONSW	ISSOM to ISSprOM - ONSW	ISSprOM conversion
711	Out-of-bounds route	Gap specified (between 4.0 and 6.0 - centre to centre). Specified minimum and maximum spacing (centre-to- centre)			No symbol	No symbol
714	Temporary construction or closed area		ISSprOM 2019 Temporary construction or closed area (714): The mention forbidden to cross has been removed. The area is delineated by a 0.1 mm boundary line. A minimum width and a minimum area have been added.	No symbol		Eye check line around edge of symbol.