Quick Guide to Letter Optical Character Recognition (OCR) Specification

This Quick Guide (QG) will provide you with an understanding of what key attributes for the OCR specification are needed so you can create and design Letters which can then be posted meeting OCR requirements. The details in this QG are taken from the main OCR specification which must be referred to when preparing your Letters. The full OCR specification can be found in the relevant User Guide[1]. For additional help, please ask your usual Royal Mail contact or helpline, or your mailing provider.

This QG is split in to three sections:
Sections 1 and 2 apply to all Letters you create and design. In addition, section 3 applies if the Letter has additional design features e.g. perforations.
- Sections 1 ~ physical design;
- Section 2 ~ machine readability;
- Section 3 ~ additional design features.

Each section is split in to key criteria groups with associated attributes listed as 'Primary' or 'Secondary'. Primary means we may check your mail upfront as part of our revenue protection process. You will achieve maximum efficiencies and ensure your Letters are delivered in their intended condition if all elements of the specification are achieved. You will only need to refer to sections 1 and 2 for the design and production of Letters typically sent via OCR. The 'Impact' column determines the operational impact on our automation if the attribute is not achieved and this is relevant to any corrective action which may be applied.

1. Physical design

	1.1. Letter format:	Impact
Primary	• Letter format only;	• High
	• Max 240mm x 165mm;	• High
	• Min 140mm x 110mm *(for Letters posted via Access)*;	• High
	• Min 140mm x 90mm *(for Letters posted via Retail)*;	• High
	• Maximum 100g;	• High
	• Max 5mm thick;	• High
	• Min 0.25mm thick;	• High
	• Rectangular (landscape only) or square:	• High
	a. all 4 sides to be 90 degrees;	• High
	b. all edges to be straight.	• High

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[1] For Retail, this Quick Guide applies only to the Letter format with the Low Sort option. The full specification is detailed in the Machine Readable chapter of the 'User Guide for Marketing, Publishing and General Correspondence'. For Access Services the full OCR specification detail is detailed in its own Appendix of both the 'User Guide for Condition 9 Access Services' and the 'Access Letters User Guide'.

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		Impact
Secondary		

1.2. Letter material + design:		**Impact**
Primary	• Constructed of paper; • Delivery Address Block positioned with in specified area (see J tool[2]); • Display an approved Indicium/ Indicia[3] of the correct size and positioning (Retail require the correct service also); • Clear zones for Royal Mail route + tag codes (see J tool);	• High • High • High • High

Secondary	• The Letter must be able to bend so it is capable of being transported round the arc of pullys;
	• Lateral movement does not exceed the current specification.
	• Opacity of ≥85% for envelope paper;
	• Porosity of 700ml/minute;
	• Print contrast ratio for addresses printed on envelopes ≥50%;
	• Print contrast ratio for addresses printed on an insert ≥55%;
	• No metal content (small staples or paperclips accepted);
	• Window(s) on one side must not exceed 50% of the Letter;
	• Absorbency of 15-35gsm of water per minute;
	• Gloss value of the window material ≤150 when measured at 60° (ASTM 2457);
	• Window haze ≤75% when measured ASTM D1003-00;
	• Window to be constructed of film (open apertures not allowed);
	• All 4 sides must be sealed;
	• Paper weight (minimum):
	  I. envelope 70gsm;
	  II. Postcard 200gsm.
	• Pale or pastel colours;
	• Inserts other than paper are glued to the main insert so they don't move around;
	• There are no more than 2 windows on the front of the Letter. The second window must not contain text that looks like an address;
	• Background reflectance on which the address is printed to be 35% in the red region (600nm) – measure by spectral reflectometer;
	• Reflective difference of ≥30%;
	• Window material is robust and securely fixed;
	• Flap sealed 25mmx35mm when presented in bags;
	• Flap sealed 35mmx35mm when presented in trays.
		• Low
		
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2. Machine readability

2.1 Address content and positioning:	**Impact**

		Impact
Primary	• At least 90% (95%[4]) accurate to PAF®;	• High
	• The Delivery Address Block is to be positioned 15mm from the top, left and right edge and 18mm from the bottom edge (see J tool);	• High
	• Minimum 5mm clear zone around the geographic address and company name when included and to remain visible and be legible at all times.(see Jtool);	• High
	• The Postcode must be in capitals and on the last line of the address;	• High
	• No blank lines within the Delivery Address Block;	• High
	• Max skew 5° of the Delivery Address Block.	• High
Secondary	• Only one Delivery Address Block on the front on the Letter;	• Low
	• Country name excluded;	• Low
	• Addressee details to remain visible at all times;	• High
	• The number of characters in each line (including spaces) does not exceed 64;	• Low
	• Punctuation corresponds with PAF®;	• Low
	• Any Mailer Defined Information (MDI) is included as part of the Delivery Address Block.	• Low

2.2 Address formatting:		**Impact**
Primary	• One or two character spaces between the outward and inward part of the Postcode;	• High
	• The whole of the address is in the same type face and font size (between 10-12pt);	• High
	• Fonts must not be:	
	I. _italic;_	• High
	II. handwritten;	• High
	III. **bold;**	• High
	• Spacing between individual words is < 5mm;	• High
	• Each element of the address on a separate line;	• High
	• Left Justified.	• High
Secondary	• Even spaces between each line of the address and individual characters;	• Low
	• Use one of the recommended fonts listed in the User Guide;	• Low
	• The address in is title case.	• Low

2.3 Return address:		**Impact**
Primary	• A UK return address;	• Low
	• Matches PAF®;	• Low
	• It is identified as a return address, e.g. precede it with the words 'return address.'	• Low
Secondary	• It is positioned on the:	
	o Back of the Letter;	• Low
	o At the top;	• Low
	o Left justified;	• Low
	o Lucida Console or Letter Gothic fonts of 10-12pt;	• Low
	o Preceded by the words return address;	• Low
	o In a central area 40mm x 40mm.	• Low
	• If positioned on the front then the same as above with the exception of positioning where it must be in an area no lower that 40mm from the top and no less than 75mm from the right hand edge.	• High

3. Additional design features:

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3.1 Zip Tie perforations:		Impact
Primary	• Be die cut;	• High
	• On the back of the Letter;	• High
	• Located on a flap ≤40mm wide;	• High
	• Located ≥9mm from the edge of the flap.	• High
Secondary	• Glue to be cured and to remain inside the Letter;	• High
	• Paper weight ≥150gsm;	• Low
	• One zip tie on the Letter;	• High
	• Tear in relation to Indicium/Indicia;	• High
	• Cuts and bridges to be of uniform size;	• Low
	• Peel adhesion strength of glue to be ≥4.5N.	• Low

3.2 Roulette perforations:		Impact
Primary	• Be die cut;	• Low
	• Perforations to be on max of 3 sides with one being the longest side;	• High
	• Longer perforation to 'fit within' the shorter perforations – i.e. H;	• High
	• Perforations are inset 12mm (±1mm) from the edge of the Letter.	• Low
Secondary	• Glue to be cured and to remain inside the Letter;	• High
	• Paper weight ≥100gsm;	• Low
	• Perforations on any short side to be inset at 1.3- 2mm and a bridge of ≥0.8mm;	• Low
	• Perforations on any long side to be inset 0.5-1.4mm and a bridge of ≥0.4mm;	• Low
	• Cuts and bridges to be of uniform size;	• Low
	• Short side perforations to extend from the envelope edge;	• Low
	• Perforations not to go over the Indicium/Indicia;	• Low
	• Perforated edges must be sealed;	• High
	• Peel adhesion strength of glue to be ≥4.5N.	• Low

3.3 Pressure seal:		Impact
Primary	• Be die cut ;	• Low
	• Letter is produced from a single sheet of paper;	• High
	• Perforations to be on both short sides.	• High
Secondary	• DL design must be ≥100gsm (3ply);	• Low
	• C5 design must be ≥150gsm (2ply);	• Low
	• Landscape orientation;	• Low
	• Any roulette tear to be on the back;	• High
	• One roulette tear;	• Low
	• Perforations to be set at 1.3- 2mm and a bridge of ≥0.8mm;	• High
	• Cuts and bridges to be of uniform size;	• High
	• Short side perforations to extend from the envelope edge;	• Low
	• Perforations not to go over the Indicium/Indicia;	• Low
	• Perforated edges must be sealed;	• High
	• Peel adhesion strength of glue to be ≥4.5N;	• Low
	• Cuts to be rectangular and have a width of ≤0.1mm;	• Low
	• Located >10mm from the long edge and >10mm wide;	• High
	• Cut must be <3.3mm and a bridge of >0.6mm;	• Low
	• Long perforated edge may extend on to the short perforated edge;	• High
	• Sealing adhesive to be <80 microns thick;	• Low
	• Glue to be cured and to remain inside the Letter.	• High

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3.4 Windows on front and back:		

Primary	• Window on the back:
	  I. Be circular;
	  II. A diameter of ≤ 48mm;
	  III. Perimeter of the window be 31mm (± 2mm) from the bottom and centred.
		• High
		• Low
		• Low

Secondary	• Paper inserts only; • Window on the front must be rectangular, and be positioned 18mm from the bottom edge and each and side. • Min length 212mm; • Min height 110mm • Max length 240mm; • Max thickness 1mm; • Only one window on each side; • Max weight 20g.	• Low • Low • Low • Low • Low • Low • Low • Low

Proportionality Martix

	Volume	LOW volume detected =	MEDIUM volume detected =	HIGH volume detected =
Access	Policy	Mailing Items in a single Container at one Inward Mail Centre	Mailing Items in two or more Containers at one or two Inward Mail Centres	Mailing Items in two or more Containers at three or more Inward Mail Centres
	HIGH operational impact	All Mailing Items within the Container will be charged at the next applicable service for which the Mailing Items meet the specification	100% of Mailing Items for the Posting(s) or relevant segment of the Posting(s) at the identified Inward Mail Centres will be charged at the next applicable service for which the Mailing Items meet the specification	100% of Mailing Items for the Posting(s) or relevant segment of the Posting(s) will be charged at the next applicable service for which the Mailing Items meet the specification
	LOW operational impact		100% of Mailing Items for the Posting(s) or relevant segment of the Posting(s) at the identified Inward Mail Centres will be charged an additional 1p per item	100% of Mailing Items for the Posting(s) or relevant segment of the Posting(s) will be charged an additional 1p per item
Retail	Policy	Find one to five containers with faulty items, levy a fixed charge	Up to 10% of mailing detected	Over 10% of mailing detected
	HIGH operational impact	£25 fixed fee.	10% of mailing reverted to next applicable service	100% of mailing reverted to next applicable service
	LOW operational impact		100% of mailing surcharged with a fixed unit charge of 0.1p per item	100% of mailing surcharged with a fixed unit charge of 1p per item