

## Market Snapshot – December 2016

Of all the UK's recovered material prices metal can prices exhibited the strongest gains, increasing sharply during Q4-2016 with steel can prices up 17% and aluminium can prices up 12%. An increase in virgin aluminium and iron ore prices have contributed to the price strength in metal cans. The outlook for iron ore prices will be followed closely in 2017 as continued high iron ore prices should increase demand for steel cans from steel mills.

Recovered paper and board prices are broadly stable over Q4-2016 after rising sharply over the course of the year. The decline in sterling following the EU referendum contributed to the rise with export demand increasing as the UK's recovered paper exports became more competitive against its trading partners. Attention during Q4-2016 focused on the difficulties arising from the collapse of the Hianjin shipping company and the impact this would have on recovered paper trade. Although Chinese imports fell by 27% in the month to October this is not unusual for the time of year.

Recovered plastic packaging markets showed little strong trend during Q4-2016 with declines in recovered PET bottle prices countered by gains in HDPE bottle prices.

Clear and amber cullet prices fell by 35% and 47% respectively during the last quarter of 2016. Green and mixed cullet prices are broadly stable.

Recovered textile prices appear to have strengthened slightly during Q4-2016. Recovered textiles sourced from banks are valued at around £225 per tonne while charity shop textiles are valued at around £313 per tonne.

*This quarters' Market Snapshot also includes a look at the oil market following the Organisation of Petroleum Exporting Countries (OPEC) and its allies decision to cut production and considers what this could mean for recovered plastic prices. It also includes a review of the latest Chinese economic data and considers what the outlook is for 2017.*

**Table 1: Key recovered material and commodity prices**

£ per tonne	Dec-15	Sep-16	Dec-16	% change	
				Sep-16 to Dec-16	One year
<b>Recovered paper</b>					
OCC	70	105	100	-5%	43%
News & PAMs	75	93	100	8%	33%
Mixed	50	85	80	-6%	60%
<b>Recovered plastic</b>					
Clear PET	95	155	143	-8%	51%
Coloured PET	35	50	45	-10%	29%
Mixed HDPE	130	185	208	12%	60%
Mixed polymer	55	103	103	0%	87%
Natural HDPE	325	350	360	3%	11%
LDPE 98:2	216	310	335	8%	55%
<b>Recovered cans</b>					
Aluminium	500	770	863	12%	73%
Steel	15	60	70	17%	367%
Mixed	35	63	68	8%	94%
<b>Glass</b>					
Clear	20	23	15	-35%	-25%
Amber	13	15	8	-47%	-38%
Green	5	8	8	0%	60%
Mixed	-8	15	13	-13%	-263%
<b>Textiles</b>					
Banks	210	220	225	2%	7%
Charity Shops	270	300	313	4%	16%
<b>Virgin commodities</b>					
Pulp (NBSK)	537	609	640	5%	19%
PET	673	732	745	2%	11%
HDPE	947	970	995	3%	5%
LDPE	950	966	991	3%	4%
Cotton	939	1120	1246	11%	33%
Aluminium (LME)	1002	1200	1355	13%	35%
Iron ore	27	43	62	44%	130%
<b>Energy</b>					
Oil (Brent, £ per barrel)	25	35	42	20%	65%

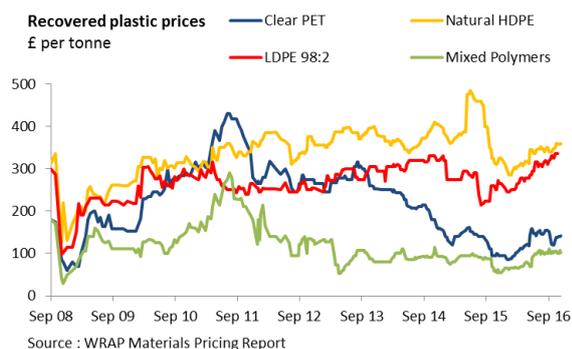
Sources: WRAP Materials Pricing Report, Thomson Reuters Datastream

Note: Percentage changes are based on the mid-points of the ranges where applicable.

## RECOVERED MATERIAL MARKETS

### Plastics

The direction of recovered plastic bottle prices was mixed during Q4-2016 with lower PET bottle prices countered by higher HDPE bottle prices. Over the past 12 months mixed polymer prices have seen the strongest gains, rising 87% to over £100 per tonne. Meanwhile, natural HDPE bottle prices have increased by just 11% to £360 per tonne.



Virgin plastic prices are broadly unchanged during Q4-2016. Over the past 12 months virgin PET prices have seen the largest gains, rising by over 10% to around £745 per tonne.

#### Box 1: Oil prices

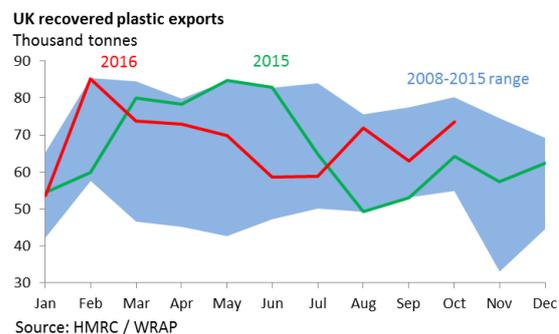
The announcement by the Organisation of Petroleum Exporting Countries (OPEC) that it would cut oil production resulted in oil prices rising to around \$55 per barrel in early December.

If OPEC and some non-OPEC countries deliver the promised cut then oil prices could rise further, potentially putting upward pressure on virgin plastic prices. However, there are risks to the downside too: non-compliance among OPEC members and those non-OPEC countries like Russia that have agreed to support OPEC as well as higher US shale oil output mean that oil prices may not rise much further.

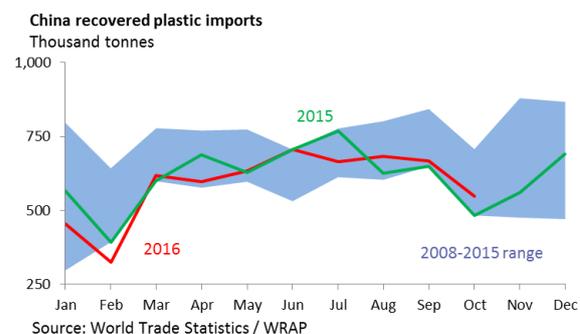
As to whether higher oil prices will result in higher recovered plastic prices the evidence is mixed. Over the past 5 years, by far the strongest correlation with oil has been with clear PET bottle prices (89%). Other recovered plastic prices show much lower positive correlation with oil prices.

The UK exported 681kt of recovered plastic (both packaging and non-packaging) during the period Jan-Oct 2016, broadly unchanged

compared with the same period in 2015. Looking at the period Jul-Oct the UK exported almost 270kt, up 15% on the same period in 2015. The increase may have been supported by the drop in sterling since the EU referendum.



Chinese imports of recovered plastic (from all countries) totalled 5.9Mt during the period Jan-Oct 2016, down 3% compared with the same period in 2015.

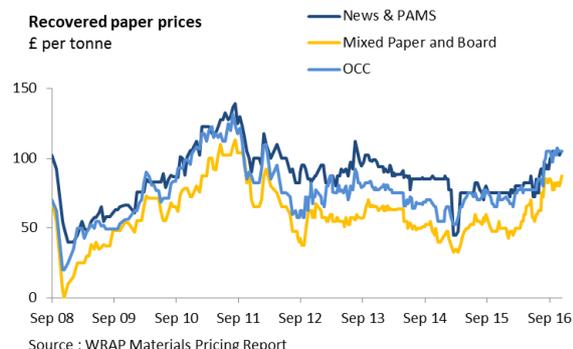


Plastic packaging recycling compliance data shows that 253kt was recycled during Q3-2016 (the latest quarterly data available), up 24% on year earlier levels. Based on provisional packaging obligation data and including carryover from December 2015, plastics have met 79.5% of its 2016 target. Plastic PRN prices typically traded at around £15 per tonne during the fourth quarter, down from around £35-£40 per tonne in mid-2016. Plastic PRN prices increased in late December to around £25 per tonne on uncertainty as to whether the target had been met.

### Paper

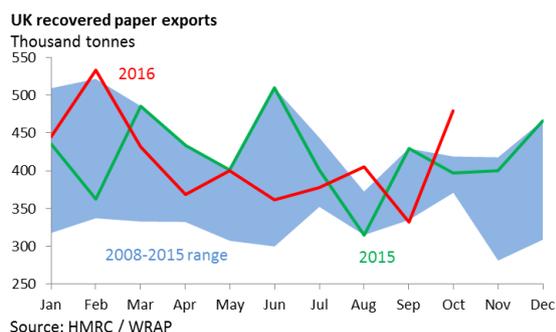
Recovered paper and board prices are broadly unchanged during Q4-2016 following strong gains over the past year. Compared with twelve months ago OCC prices have increased by over 40% to £100 per tonne while news & PAM prices rose by one-third, also to £100 per tonne. Mixed paper and board prices rose to over £80 per tonne during the fourth quarter, the highest levels seen since late 2011.

The drop in sterling following the EU referendum increased competition for UK recovered paper and card from buyers in Asia, as the UK's recovered paper and card was now more competitive when compared with our main competitors. An increase in pulp prices is also a factor behind the rise in recovered paper prices; in sterling terms pulp prices have risen by almost 20% over the past twelve months to £640 per tonne (pulp is a substitute in the manufacture of paper products).



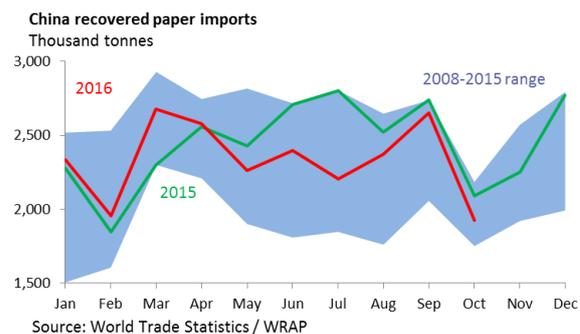
The UK exported 4.1 Mt of recovered paper during the period Jan-Oct 2016, broadly stable compared with the same period in 2015. Of the UK's exported recovered paper and board, 75% was sent to China, up from 71% in Jan-Oct 2015.

UK exports of recovered paper rose by 45% between September and October to 480kt, sharply higher than seasonal norms and the highest monthly export volume seen since March 2015. A sharp increase in exports of mixed paper grades contributed to the rise, increasing by 69% in the month to October.



China imported 23.4 Mt of recovered paper (from all countries) during Jan-Oct 2016, down 4% compared with the same period in 2015. In the previous *Market Snapshot* we highlighted the risk that the bankruptcy of the South Korean shipping container company Hanjin (the world's seventh largest shipping liner) could have on recovered material trade. Chinese recovered paper imports fell 27% between September and October, in part due to the problems at Hianjin. However, it should be noted that Chinese imports of recovered paper do typically fall sharply during October

as Chinese manufacturers have already secured much of their packaging materials for the Christmas period.



## Box 2: China macro

Chinese manufacturing activity has rebounded since late 2015 with activity in November 2016 the strongest for over 2 years. Non-manufacturing activity has also been strong. Latest average forecasts point to Chinese economic growth slowing from 6.7% in 2016 to 6.4% in 2017.

Chinese authorities attempted to rein in overcapacity in the country's coal industry at the start of 2016 through various restrictions. However, the policy may have been too successful with coking coal prices doubling as demand for coal from abroad increased. Higher coking coal prices have, in turn supported increases in the price of iron ore, nickel and other metals.

Authorities' attempts to bring the boom in coal prices under control, as well as curbing investor speculation over further rises means that prices could come under pressure in 2017.

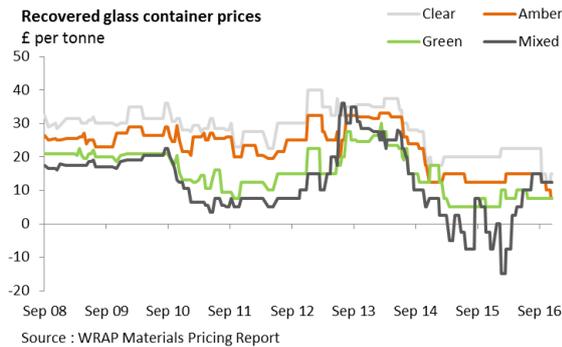
Meanwhile, doubts about the sustainability of the country's debt do not go away. Liquidity fears resulted in interbank borrowing rates and longer term bond rates move sharply higher during early December.

If depreciation of the Yuan versus sterling and other major currencies continues, this may mean that Chinese demand for recovered material imports does not grow as strongly as imports will become relatively more expensive. On the upside, strong manufacturing growth indicates continued robust demand for recovered materials.

## Glass

Clear and amber cullet prices fell by around £8 per tonne during Q4-2016 to £15 per tonne

and £8 per tonne respectively. Green and mixed cullet prices are broadly stable.



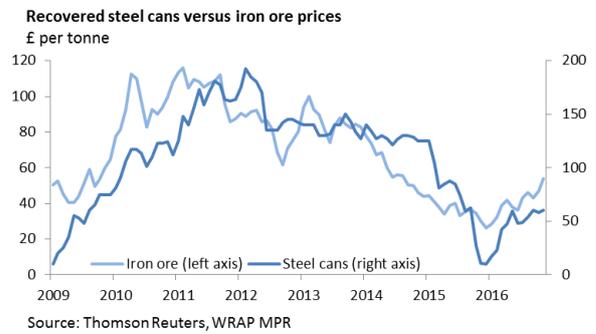
Glass packaging recycling compliance data shows that 422kt was recycled during Q3-2016, down 3% compared with Q3-2015. Based on provisional packaging obligation data and including carryover from December 2015, glass has met 75.2% of its 2016 target. Glass PRN prices are broadly stable around £10-£15 per tonne.

### Aluminium & steel

Recovered aluminium can prices jumped by over £90 per tonne during Q4-2016 to around £860 per tonne. The rebound in recovered aluminium can prices has been supported by higher virgin aluminium prices (up 13%).



Recovered steel can prices have nearly increased by a factor of 5 over the past 12 months to £70 per tonne. The rise has been supported by higher iron ore prices - steel mills typically increase demand for steel scrap when iron ore (their main feedstock) increases in price - and steel cans are relatively inexpensive compared with construction grade steel scrap. Iron ore prices have increased sharply during 2016 due to higher costs (a doubling in coking coal prices) in China and speculative demand.

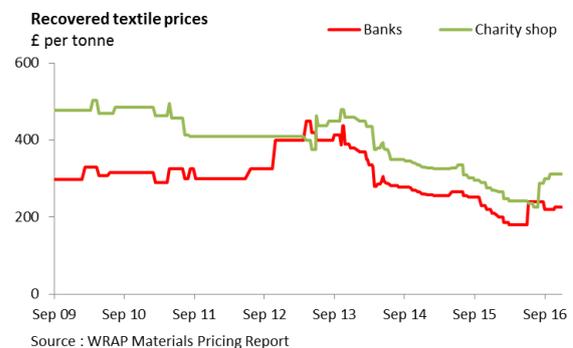


Aluminium packaging recycling compliance data shows that almost 22kt was recycled during Q3-2016 (down 9% on year earlier levels). Based on provisional packaging obligation data and including carryover from December 2015, aluminium has met 81.2% of its 2016 target. Aluminium PRN prices have traded around £10-£15 per tonne during Q4-2016.

Steel packaging recycling compliance data shows that 96kt was recycled during Q3-2016, up 19% on year earlier levels. Based on provisional packaging obligation data and including carryover from December 2015, steel has met 85.4% of its 2016 target. Steel PRN prices fell from around £15-£20 per tonne to £5 per tonne during the final quarter of 2016.

### Textiles

Recovered textile prices are broadly unchanged in Q4-2016 with textiles sourced from banks valued at around £225 per tonne while charity shop textiles (the value that a charity receives for charity shop clothing sold to merchants that collect the garments from the shop) valued at just over £300 per tonne. Note that the quality of the textiles collected and transport costs may have a significant impact on the overall price achieved.



## Glossary

CPI	Confederation of Paper Industries
EA	Environment Agency
HDPE	High density polyethylene
HMRC	Her Majesty's Revenue & Customs
kt	Thousand tonnes
LDPE	Low density polyethylene
Mt	Million tonnes
News & PAMs	Newspapers & magazines
NPWD	National Packaging Waste Database
OCC	Old corrugated cardboard
PET	Polyethylene terephthalate
PRN	Packaging Recovery Note

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**Waste & Resources  
Action Programme**

The Old Academy  
21 Horse Fair  
Banbury, Oxon  
OX16 0AH

Tel: 01295 819 900  
Fax: 01295 819 911  
E-mail: [info@wrap.org.uk](mailto:info@wrap.org.uk)

Helpline freephone  
0808 100 2040

[www.wrap.org.uk/marketinformation](http://www.wrap.org.uk/marketinformation)