

The Marketplace for PRNs

Market Status Report By Tom Rickerby, Head of Business Development



Trading volumes suffered this quarter as low opening PRN prices and perceived low risk conditions failed to stimulate early buying demand. Plastic has been the only material to buck this trend, where the impact of China's National Sword (see page 4) initiative has been acutely felt in the form of a rising PRN price.

The 262,024 tonnes traded during the period was down 47% on the previous quarter and 33% on the same period last year. Of the total tonnage traded 91,664 tonnes were traded in the spot market and 170,360 tonnes were traded across the forward markets.

Paper

The Paper market suffered its weakest volume trading quarter in over 2 years as record low opening prices (75p-85p) and the perception of a near zero risk market failed to stimulate early demand. Traded volume fell 69% on the same period last year and with Recovered Paper prices hitting a record high by mid quarter sellers were braced for a highly predictable and low value year in the PRN market. However a 'flash crash' in the Recovered Paper prices in mid-April and ongoing concerns over the impact of high freight rates and China's National Sword has eroded confidence in the Paper market. As a result, PRN prices firmed up to 95p towards the end of the quarter. The average spot price for the quarter, 88p, is 15% lower than the same period last year.

Plastic

Plastic also opened the year in uncharacteristically stable fashion, trading between £25.25 and £26.00 per tonne. However, this period of stability only lasted up until late February when the announcement of China's National Sword initiative sent prices on an upward price spiral. Fears of a significant slow down in the export market pushed PRN spot prices to a year high of £48.00 per tonne by the end of the quarter. Sellers have retreated from the market in anticipation of higher prices if export restrictions remain in place and new markets cannot be found for low grade material. However buyers remain reluctant to push prices higher without clear evidence that PRN generation has been significantly impacted. Excellent volume traded across all forward markets, tracking the rise in the spot price.

Steel

Steel's soft opening prices slipped further in Q1 as buoyant scrap markets saw PRNs in strong supply. PRN prices fell 21% to £6.75 in the spot market. Forward trading fell to similar levels as sellers scrambled to lock in volume for later in the year. Traded volume was down 20% on the previous quarter and 7% on the same period last year.

Glass Remelt

Trading in Glass Remelt PRNs in Q1 took on a familiar trend to the 2016 market with prices fixed around the £12.00 mark. Despite some early trading at £13.00 in the spot market, Remelt prices fell to £11.90 in the April and July forward markets on the back of larger orders. Traded volume was up 73% on the same period in 2016.

Glass Aggregate

Like Remelt, the Glass Aggregate market opened flat with the spot market trading at an average of £11.78, up 14% on the 2016 Q1 price. Volume trades commanded a better price of £11.45 in the forward market. Total volume for the quarter was up nearly 6 times that of the same period last year.

Wood

Despite forecasts of another substantial oversupply in wood again this year, PRN prices have been creeping up in the first 3 months of

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	High	Low	Traded This Quarter	Quarter Average Traded Price	YTD Average Traded Price	Year to date aggregated traded
Paper						
Spot 2017	£1.50	£0.75	25,576	£0.88	£0.84	34,286
Apr Fwd 2017	£0.95	£0.75	20,000	£0.85	£0.88	30,000
Jul Fwd 2017	£0.95	£0.75	29,411	£0.86	£0.96	29,411
Plastic						
Spot 2017	£48.00	£25.25	40,373	£37.27	£35.09	50,136
Apr Fwd 2017	£45.00	£26.00	9,000	£37.44	£33.48	13,200
Jul Fwd 2017	£40.00	£26.50	9,788	£37.24	£37.24	9,788
Oct Fwd 2017	£40.00	£28.00	11,000	£36.45	£40.00	11,000
Dec Fwd 2017	£43.00	£29.00	9,500	£38.37	£38.37	9,500
Glass Aggregate						
Spot 2017	£12.00	£11.50	1,646	£11.78	£11.66	2,664
Jul Fwd 2017	£11.45	£11.45	15,000	£11.45	£0.45	15,000
Glass Remelt						
Spot 2017	£13.00	£12.50	2,230	£12.93	£12.68	2,874
Apr Fwd 2017	£11.90	£11.90	15,000	£11.90	£11.92	18,000
Jul Fwd 2017	£12.00	£11.90	14,000	£11.91	£11.97	39,350
Oct Fwd 2017	£12.00	£12.00	300	£12.00	£12.00	300
Steel						
Spot 2017	£10.00	£6.75	11,763	£7.09	£7.34	14,741
Apr Fwd 2017	£7.50	£7.00	6,150	£7.16	£9.32	15,200
Jul Fwd 2017	£7.00	£6.75	5,013	£6.90	£6.90	5,013
Oct Fwd 2017	£6.75	£6.75	2,000	£6.75	£6.75	2,000
Wood						
Spot 2017	£2.00	£1.75	2,557	£1.93	£1.85	3,357
Jul Fwd 2017	£2.00	£1.55	6,521	£1.83	£1.73	10,021
Oct Fwd 2017	£2.00	£1.55	5,000	£1.81	£1.67	10,500
Dec Fwd 2017	£2.00	£1.75	2,000	£1.88	£1.67	5,500
Aluminium						
Spot 2017	£12.50	£8.50	total	£9.99	£9.99	1,070
Apr Fwd 2017	£10.00	£10.00	200	£10.00	£10.44	1,700
Jul Fwd 2017	£10.00	£10.00	200	£10.00	£10.00	200
Oct Fwd 2017	£10.00	£10.00	200	£10.00	£10.00	200
Dec Fwd 2017	£10.00	£10.00	200	£10.00	£10.00	200
Recovery						
Spot 2017	£0.50	£0.40	6,531	£0.48	£0.46	8,618
Apr Fwd 2017	£0.50	£0.50	4,000	£0.50	£0.50	4,000
Jul Fwd 2017	£0.50	£0.40	3,577	£0.42	£0.42	3,577
Oct Fwd 2017	£0.40	£0.40	1,150	£0.40	£0.40	1,150
Dec Fwd 2017	£0.40	£0.40	1,150	£0.40	£0.40	1,150

The Marketplace for PRNs

Managing Directors Comments – May 2017



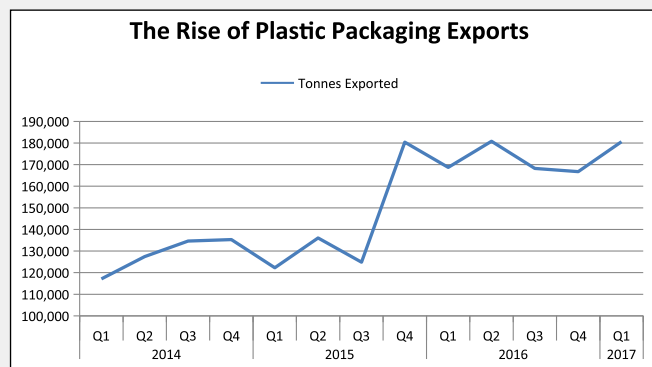
Q1 has been a quiet quarter from a t2e trading perspective but a busy one for data with the final publication of the 2016 data and the first 2017 data. Add to that a confirmation of the targets for 2018 - 2020 and a pending election and it has been a busy time politically. To cap it all China has introduced a new 'Green Fence',

which combined with increased shipping rates, although these have come-off as the quarter comes to a close, has created disincentives to export despite the historically low exchange rate.

Final 2016 data analysis

In 2016 demand grew in year by 2% and year on year by 3.5% but it was far surpassed by the year on year growth in supply of 10%. Most noticeable growth areas were in steel and plastic exports (up 35% and 21% respectively) which was fortunate because UK recycling declined by 0.3%. However there was good news. Wood reprocessing grew by 8%, while Glass and Plastic broke even, with Steel reprocessing growing rapidly year on year and quarter on quarter as the year drew to a close. As a result not only was the 2016 obligation met easily with most PRN prices tapering to administrative values as the year closed but also the 2017 targets, despite a potential increase of some 100,000 tonnes, can be met with only minimal growth in Glass and Plastic required.

As a consequence the largest carry forward of recycling PRNs since 2006 was made. The one exception was Glass where there is a reduction in carry forward of almost 20,000 tonnes.



Q1 2017 Data

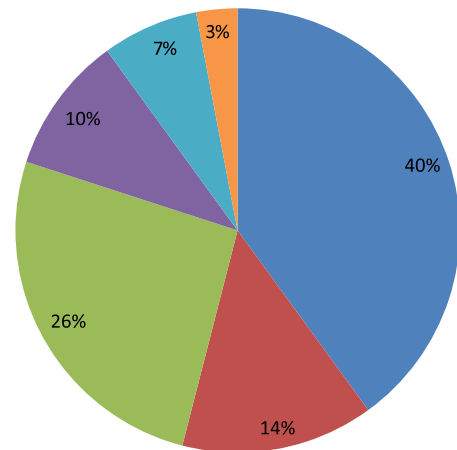
The opening obligation was about 111,000 tonnes lower than anticipated but with some 350 companies still due to complete their submissions in all probability the demand side will grow. However the impacts of China's Operation National Sword are beginning to show. In contrast to 2016 exports are in decline both year on year and quarter on quarter by some 5%. The noticeable exceptions to this are Plastic, which unexpectedly as of yet appears unaffected by Operation National Sword with exports missing their best quarter ever by some 200 tonnes growing by 7% year on year and 8% quarter on quarter, and Glass Remelt whose exports have grown by some 18% year

on year although dropping 9% quarter on quarter. Whereas UK reprocessing led by Steel, whose PRN production has more than doubled year on year, has increased year on year by 9%.

This combined with a substantial carry forward gives the impression that targets will be easily met in 2017 causing a downward pressure on prices and the largest number of PRNs being issued in the first quarter since 2011 as prudent buyers try to consolidate opportunities while they are available.

t2e Reprocessor and Exporter Survey on potential use of PRN income 2017

- Infrastructure investment
- Cost of Complying
- Funding Collection
- Future investment
- New Market development
- Developing communication



2018 – 2020 Targets

Slightly unfanared the Government confirmed in the spring Budget the targets it proposed in its consultation. The commitment to producer responsibility, PRNs and increased recycling were all welcomed. Particularly so against a backdrop of a snap election in which to date nothing has been mentioned about the environment in a country which post-Brexit will have no strategy or underlying policy for the environment.

Despite this uncertainty our reprocessor and exporter survey shows that in 2017 there is increased confidence with 40% of the anticipated PRN income being spent on infrastructure while a further 40% will be used to fund collection and develop end markets.

Thank you for your continued support. 2017 still has a long way to run. It is sunny now let us hope that it continues to shine. Thank you too to Mike Jefferson for his comments. China, along with quality, shipping costs and exchange rates, will continue to be an important part of the global recycling matrix.

Angus Macpherson
Managing Director

Q4 Supply Analysis *By Andrew Letham, Sales and Marketing Manager*



With well document issues in China, increased shipping rates and limited container availability all impacting on the export market the release of the Q1 data was highly anticipated by both buyers and sellers. A suspiciously large March Plastic monthly figure had lead to questions being asked over the validity of the data and although the agency responded by confirming that there was a reporting error they were unable to amend it in time for the release of the Q1 supply figure.

The initial Q1 Plastic figure reported of 331,546 tonnes would have been the largest ever seen by over 60,000 tonnes and unfathomable if market sentiment was to be believed. Since Q1 data has been released, the Plastic figure has been corrected down by over 70,000 tonnes. This brought the figure more in line with reality but highlights the importance of accurate reporting so as not to distort the market.

The confirmed Plastic figure of 260,170 tonnes points to a strong January and February as National Sword began to take full effect in March. Couple that return with a carry in just shy of 65,000 it looks to be a positive result in very challenging trading conditions. Immediately after the Monthly figures were released prices dropped to £40.00 but quickly recovered to £45.00 as sellers remain resolute on pricing, driven by a need to recoup rising shipping costs. Looking ahead, there would need to be three very poor quarters to put achievement of targets in jeopardy.

Steel continued to post strong quarterly returns with 112,637 tonnes recycled. At 18.3% above the required quarterly obligation of 90,990 and with the largest carry in ever seen, prices fell a further 3.5% following the release of the Q1 data to a last traded of £6.75.

Wood again showed a sizeable return, with 97,350 tonnes reported. This means 41% of the obligation is already complete with only 142,352 tonnes, excluding carry in required to achieve target. Despite the result prices jumped 12.5% with extra incentive to put wood to bed early this year with a 16% target increase due in 2018.

A combined Q1 Glass return of 391,808 tonnes fell 8,672 tonnes short of the required quarterly obligation of 400,480 tonnes. A carry in of 61,218 tonnes gives a little breathing space but at 19,597 tonnes less than 2016 and with the assumption that some of this will be carried out into 2018 there isn't a lot of room for movement. Prices remained relatively flat throughout the quarter at an average price across all markets of £11.99 for Remelt and £11.48 for Aggregate.

Aluminium fell short of the required quarterly obligation of 21,572 tonnes by 316 tonnes, the worst return since Q2, 2015. A strong 6,839 tonne carry forward should be enough to see the target achieved but with soft PRN prices (£10.22, Q1 average) and increased shipping costs the market remains heavily reliant on the performance of a few domestic reprocessors.

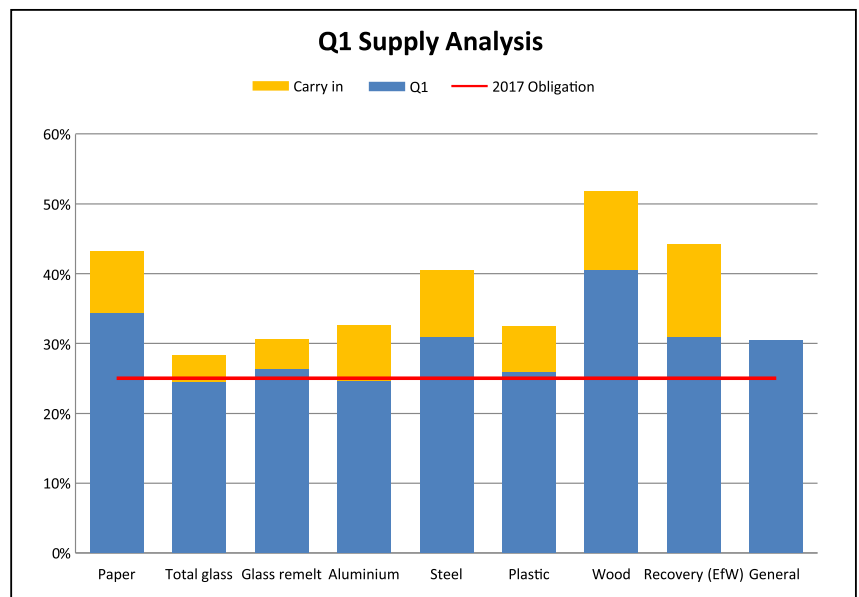
Q1 Paper recycling was down 5% on Q1 2016 with a quarterly return of 960,800 tonnes. The initial annual obligation is also down 11,267 tonnes on the final 2016 figure but is expected to grow with the appearance of new and late registrants. Increased shipping costs and limited container availability have been reflected in the PRN prices which are up 26% from the start of the year from 75p to 95p.

With a Q1 return of 183,856 tonnes, Recovery was 45,796 tonnes oversupplied in quarter before the substantial 77,900 tonne carry forward is considered. Prices have moved between 50p and 40p for volume with little suggestion that this is set to change.

Material	Carry In	Q1	2017 Obligation	YTD Supply + Carry In	Balance
Paper	246,360	960,800	2,797,794	1,207,160	-1,590,634
Total Glass*	61,218	391,808	1,601,920	453,026	-1,148,894
Glass remelt	45,343	283,115	1,073,286	328,458	-744,828
Aluminium	6,839	21,256	86,289	28,095	-58,194
Steel	34,610	112,637	363,959	147,247	-216,712
Plastic	64,709	260,170	1,001,941	324,879	-677,062
Wood	26,900	97,350	239,702	124,250	-115,452
EfW	77,900	183,856	592,241	261,756	-330,485
General *	0	321,120	1,050,559	321,120	-729,439
Total	502,661	2,027,877	7,734,405	2,546,413	-5,187,992

*Total Glass consists of the combined total supply of Glass Remelt and Glass aggregate.

* Please note the general supply figure has been generated from calculating the surplus material prns in each quarter and does not include carry in tonnage.



Meet the Market: Mike Jefferson, Director, Verde Research and Consulting Ltd National Sword



Over the last 15 years or so, China has developed extensive regulation related to the import of recovered materials and their subsequent processing. These regulations include detailed quality standards for different waste materials including for waste plastics and paper. Mechanisms put in place by the Chinese authorities to help them control waste

imports include pre-shipment certification as well as licensing of waste exporters to China and importers within the country. There has also been development of domestic waste and recycling policy including a circular economy law and legislation restricting excessive packaging.

National Sword commenced in February this year and is due to continue until November 2017. It involves several Government departments including the Environmental Protection Agency, the General Administration of Quality Supervision, Inspection and Quarantine (AQSIQ) and Chinese Customs. Much like its predecessor Green Fence in 2013, its focus is on material quality and management systems for the import of wastes and their subsequent processing.

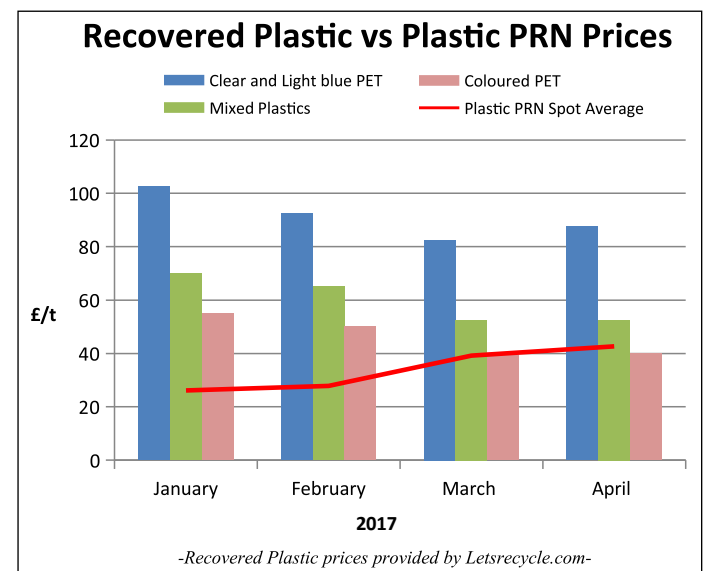
Whilst China has for many years carried out inspections at the port of arrival, these have been greatly intensified since the start of National Sword both in terms of the percentage of containers being inspected and the thoroughness of the inspections. There have also been detailed checks carried out to ensure imported waste is being recycled at the approved facilities shown on import licenses.

Alongside the inspections and enforcement action there has also been a review of wastes types permitted for import. Conclusions have not yet been announced but there is speculation that there may be an impact on some plastics and paper grades.

In the UK the operation has, to date, had most impact on the plastics sector with some Chinese importers reducing buying activity until any changes to import requirements are fully understood. Plastic

grades where there is a risk of not complying fully with national quality standards, such as lower quality commercial and industrial films, are also being avoided by Chinese buyers. This has put downwards price pressure on these grades due to the volume of material being offered to recyclers in Europe as well as in other Asian countries. Well sorted grades with greater UK and European recycling capacity, such as bottle grades as well as higher quality grades of polythene film, are currently showing more stability.

National Sword can be seen as part of the general trend to strengthen import controls for recovered materials in Asian markets. In China, it also comes against the backdrop of increased availability of domestic recyclables and increasing supply options more generally. Whilst we can expect China and emerging manufacturing economies in Asia to continue to source significant volumes of recovered material from around the world we should also anticipate an ever increasing focus on quality.



Market Status Report *Continued from Page 1*

the compliance year. Forward prices rose 23% to £2.00 per tonne as the market responded to the news of significant increases to the Wood recycling target from 2018 onwards. Projections estimate that next year's 16% target increase will boost demand by 73%, taking Wood from a market that is more than 50% oversupplied to one that is 10% undersupplied, dramatically changing the risk profile of a market that has historically competed with paper for general recycling demand. Concerns that the change in next year's market dynamic could have unpredictable consequences on this year's market has led to increased competition for Wood PRNs and helped to firm up the prices.

Recovery

Recovery prices opened at a record low following a glut of PRNs

generated in the 2016 market. Trading took place between 40p and 50p in the spot and forward market – prices more commonly seen in the closing months of an oversupplied compliance year. Traded volume was up nearly 100% on Q1 last year, whilst the average price was down 46%.

Aluminium

Q1 got off to a slow start in Aluminium with only one trade in the opening month. However increased buying activity in the latter stages of the quarter help to recover some value in the PRN and returned prices to double figures. Spot prices hit a year high of £12.50 towards the end of the quarter. Lower PRN values seem to have reduced the broker activity in the Aluminium can market reducing selling liquidity in the PRN market.