

# Hannanmetals

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## NEWS RELEASE

NOVEMBER 30, 2021

### HANNAN COPPER-SILVER SHALE AVERAGES 1.0 METRE @ 2.1% COPPER, 29 g/t SILVER WITHIN 8 KM by 1 KM AREA AT SAN MARTIN PROJECT, PERU

Vancouver, Canada – Hannan Metals Limited (“Hannan” or the “Company”) (TSXV: HAN) (OTCPK: HANNF - <https://www.commodity-tv.com/ondemand/companies/profil/hannan-metals-ltd/>) is pleased to report an update on systematic channel sample results over a large area at the Tabalosos East prospect within the San Martin JOGMEC Joint Venture (“JV”) sediment-hosted copper-silver project in Peru (Figure 1).

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#### Highlights:

- Systematic surface channel sampling of the outcropping mineralized copper shale over an 8-kilometre-long and 1-kilometre-wide area is demonstrating an emerging view of mineralization and the exploration opportunity at Tabalosos East:
  - A total of 42 of 53 channels **average 1.0 metre @ 2.1% copper and 29 g/t silver** using a lower cut of 0.5% copper and range from 2.0 metres @ 4.9% copper and 62 g/t silver to 0.2 metres @ 0.8% copper and 18 g/t silver.
  - Widths and grades are consistent with the drill discovery of the [Kupferschiefer copper-silver deposits in 1957](#).
- Better, previously unreported results from 25 channel samples reported here include **1.5 metres @ 4.0% copper and 36 g/t silver** and **1.0 metre @ 4.3% copper and 53 g/t silver** (Table 1). Assay results are pending from an additional 36 channels. Outcrop is extremely poor with <1% exposed rock in the area. Individual outcrops were located with the aid of soil samples and LiDAR surveying;
- The channel sampled area at Tabalosos East represents only 1% of Hannan’s 656 sq km of tenure at the San Martin JV area;
- Hannan continues to work closely with local stakeholders. Detailed archaeological work has now been completed at Tabalosos East and the Certificate of the Inexistence of Archaeological Remains (Certificado de Inexistencia de Restos Arqueológicos, or “CIRA”) has been approved by the Ministry of Culture from San Martin.
- The 782 line kilometre (“line km”) [LiDAR](#) survey over 64,500 hectares at San Martin has been completed with data analysis to be completed over the next month.

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Michael Hudson, CEO, states *“The 2021 exploration program has been transformational, as we continue to determine the scale, continuity and grades of the San Martin JV project. Ten months ago, the project consisted of high-grade copper-silver float in streams over very large areas, with a strong geological context provided by prior oil and gas exploration data. Today we have now identified strong facies controls and a mappable mineralized copper-shale horizon over large areas. We have completed a comprehensive 2,617-point soil survey and an industry-leading 782-line kilometre LiDAR survey, which have demonstrated continuity between sporadic outcrops and mapped an extensive zoned copper-silver system.*”

*"Now with the addition of a comprehensive channel sampling program provides, the average widths and grades have context with drill numbers found during the discovery of the vast Kupferschiefer copper-silver deposits. We also note that the channel sampled area (8 kilometres by 1 kilometre) represents only 1% of our 656 sq km of tenure at the San Martin JV area. Local stakeholders support our work, and we have achieved a key milestone with the receipt of the CIRA certificate. We look forward to the start of our planned maiden drill program at San Martin during H1 2022."*

## Field Work Update

The results of Hannan's recent work include new channel samples and previously partially sampled channels which now have been extended and re-sampled. The systematic hand-trenching is still ongoing with assay results pending from 36 channels. A total of 42 out of 53 channels (0.5% copper lower cut) reported from August 2021 to today (Table 1) average 1.0 m @ 2.1 % copper and 29 g/t silver within an 8 kilometre long and 1 kilometre wide area (Figure 2). Previously unreported results from 25 channel samples reported here include **1.5 metres @ 4.0% copper 36 g/t silver** and **1.0 metre @ 4.3% copper and 53 g/t silver** (Table 1). Outcrop is extremely poor with <1% exposed rock in the area.

A total of 2,617 soil samples have been sampled across the project area. Soil line spacing varies between 100-400 meters and between 10-50 meters. Detailed geochemical sampling by handheld pXRF units has mapped a large zoned copper-silver system, where copper soil anomalies correlate well with outcrop discoveries. Zinc anomalies occur proximal to the copper mineralization whilst manganese and iron demonstrate distal behavior in relation to the copper mineralization (Figure 3).

The 782 line kilometre ("line km") [LiDAR](#) survey over 64,500 hectares at San Martin has now been completed with data analysis to be completed over the next month. Detailed lithological and structural mapping in combination with LiDAR has been used for geological interpretation and to infer the continuity of the mineralization in zones without outcrops. Field work has identified two parallel mineralized levels that have been mapped and inferred over 8 kilometres of strike. The mineralization is focused in the hinge zone and limbs of an anticline which is believed to be influenced by halokinesis from salt inflation and subsequently folding and thrusting, related to shortening during the Andean orogeny. There still remain high priority targets to be followed up (Figure 3) and field crews are working on a daily basis to advance geological understanding.

## Context with the discovery of the Kupferschiefer

Sediment-hosted stratiform copper-silver deposits are among the two most important copper sources in the world, the other being copper porphyries. They are also a major producer of silver. KGHM Polska Miedz's ("KGHM") three copper-silver sediment-hosted mines in Poland (the "Kupferschiefer") were [the leading silver producer in the world](#) and [seventh largest global copper miner](#) in 2020. Quoted resources in 2019 for KGHM were [1,518 Mt @ 1.86% copper and 55 g/t silver](#) from a mineralized zone that averages 0.4 metres to 5.5 metres thickness.

To provide context, Hannan's widths and grade (1.0 metre @ 2.1 % copper and 29 g/t silver) from 42 channel surface samples reported here at San Martin (lower cut 0.5% copper), within an area about 8 kilometre long and 1 kilometre wide, compare with those found during the initial modern-day drill discovery of the [Kupferschiefer copper-silver deposits](#).

- In 1957 the discovery drillhole (Sieroszowice IG 1) intersected 2.0 metres @ 1.5% copper at the depth of 657 metres.
- In 1959 the Lubin-Sieroszowice deposit, based on the results from 24 drillholes contained 1,365 Mt @ 1.4% copper and 26 g/t silver in indicated resources, with a thickness ranging between 0.2–13.1 metres in an area about 28 kilometres long and 6 kilometres wide between 400 to 1000 metres depth.

Hannan's sampling, to date, has been confined to surface channel sampling.

### **Certificate of the Inexistence of Archaeological Remains**

In other news, the Certificate of the Inexistence of Archaeological Remains (Certificado de Inexistencia de Restos Arqueológicos, or CIRA) has been approved by the Ministry of Culture from San Martin. All investment projects, whether public or private, are required to have the CIRA before starting works. This certificate is one of the requirements for exploration activities and is a requirement for the Environmental Impact Statement ([Declaración de Impacto Ambiental, or "DIA"](#)) study to allow low impact mineral exploration programs, that include diamond drilling, to proceed in Peru. The CIRA is the document by which the State certifies that, in a given area, there are no archaeological remains on the surface.

The next and final step before lodgment of the DIA is to hold a public participation meeting with local stakeholders, which is expected to take place shortly. Drilling at San Martin is expected to be permitted and take place during H1 2022.

### **Technical Background**

All samples were collected by Hannan geologists. Rock and sediment samples were transported to ALS in Lima via third party services using traceable parcels. At the laboratory, rock samples were prepared and analyzed by standard methods. The sample preparation involved crushing 70% to less than 2mm, 250g riffle split, pulverize split to better than 85% passing 75 microns. The crushers and pulverizes were cleaned with barren material after every sample. Samples were analyzed by method ME-MS61, a four acid digest performed on 0.25g of the sample to quantitatively dissolve most geological materials. Analysis is via ICP-MS.

Channel samples are considered representative of the in-situ mineralization samples and sample widths quoted approximate the true width of mineralization, while grab samples are selective by nature and are unlikely to represent average grades on the property.

### **About Hannan Metals Limited (TSXV:HAN) (OTCPK: HANNF)**



Hannan Metals Limited is a natural resources and exploration company developing sustainable resources of metal needed to meet the transition to a low carbon economy. Over the last decade, the team behind Hannan has forged a long and successful record of discovering, financing, and advancing mineral projects in Europe and Peru. Hannan is a top ten in-country explorer by tenured area in Peru.

Mr. Michael Hudson FAusIMM, Hannan's Chairman and CEO, a Qualified Person as defined in National Instrument 43-101, has reviewed and approved the technical disclosure contained in this news release.

On behalf of the Board,

**"Michael Hudson"**

Michael Hudson, Chairman & CEO

### **Further Information**

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## HANNAN IN PERU

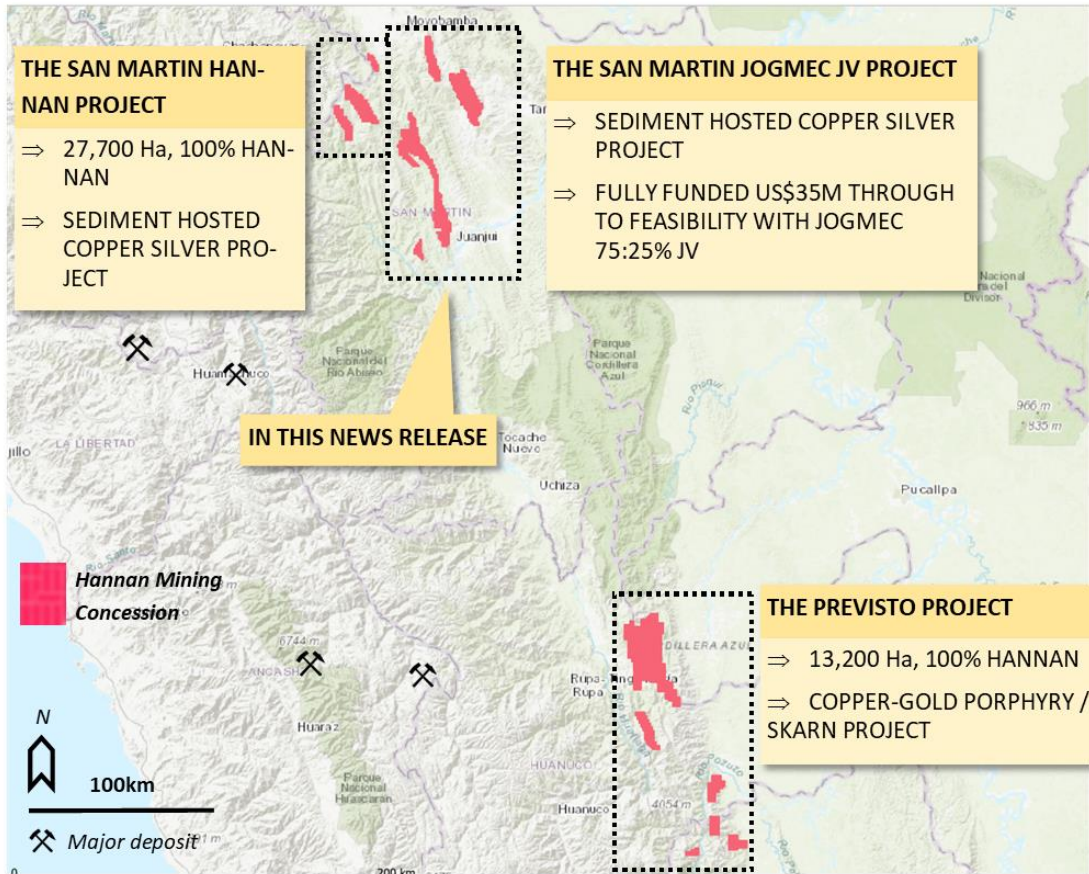


Figure 1. Overview of Hannan's project areas in Peru.

### THE SAN MARTIN JOGMEC JV PROJECT

- ⇒ Fully funded Option and Joint Venture Agreement with Japan Oil, Gas and Metals National Corporation ("JOGMEC"). JOGMEC has the option to earn up to a 75% beneficial interest in the San Martin Project by spending up to US\$35,000,000 to deliver to the joint venture ("JV") a feasibility study. 87 mineral concessions for a total of 660 sq kms.
- ⇒ On a basin scale, the project exhibits district wide mineralization hosted in reduced sedimentary rocks covering at least 120 kilometres of strike and 50 kilometres

### THE SAN MARTIN HANNAN PROJECT

- ⇒ Sediment hosted copper silver project (same as the JOGMEC JV project) but 100%-controlled by Hannan.

### THE PREVISTO PROJECT

- ⇒ Copper gold porphyry /skarn project. Initial results have outlined well defined targets with copper and gold mineralization in boulders and coincident stream sediment anomalies.
- ⇒ 100% -controlled by Hannan



## KEY CHANNEL RESULTS TABALOSOS EAST

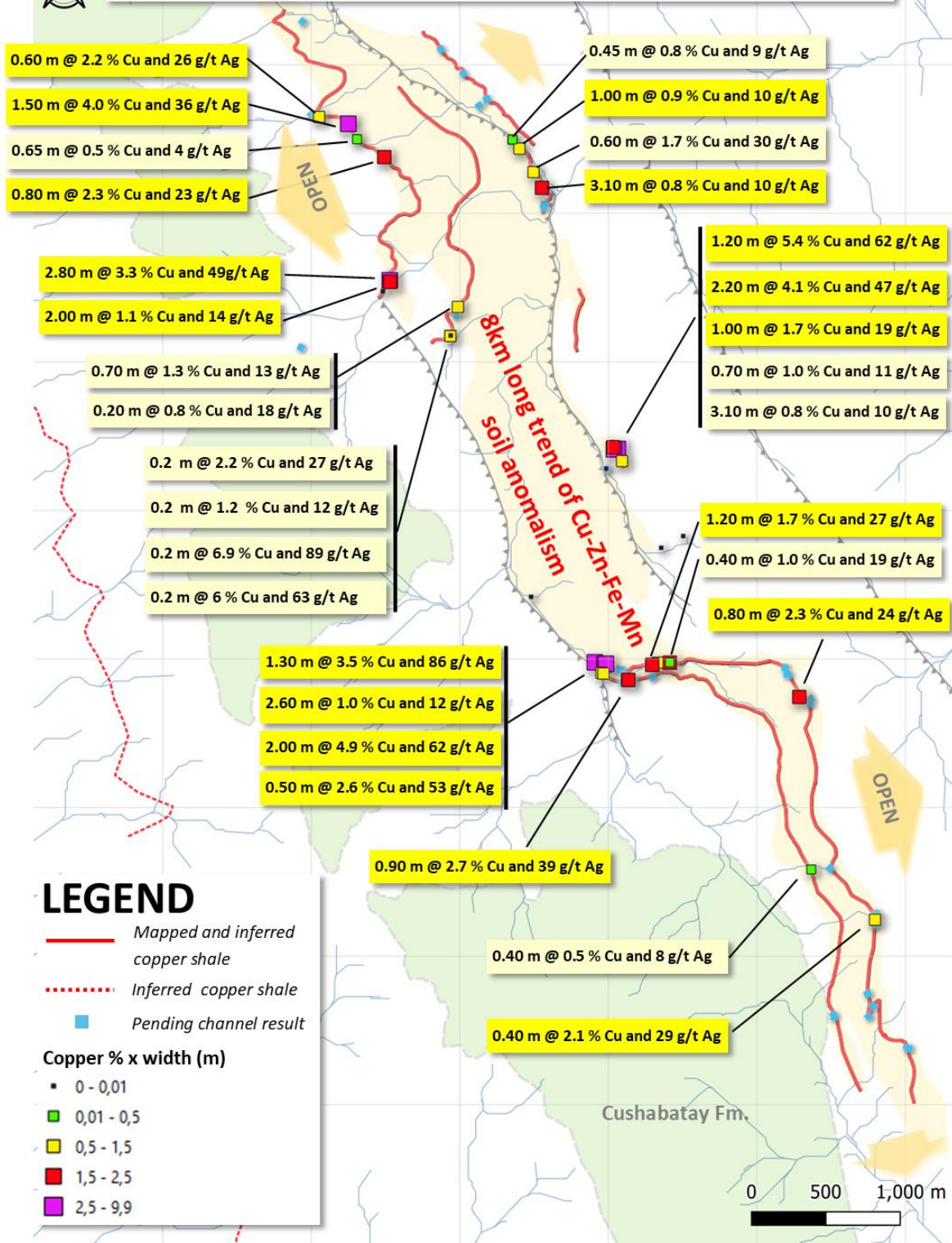


Figure 2. Location of channel samples at Tabaloso East. See table 1 for full list of samples.

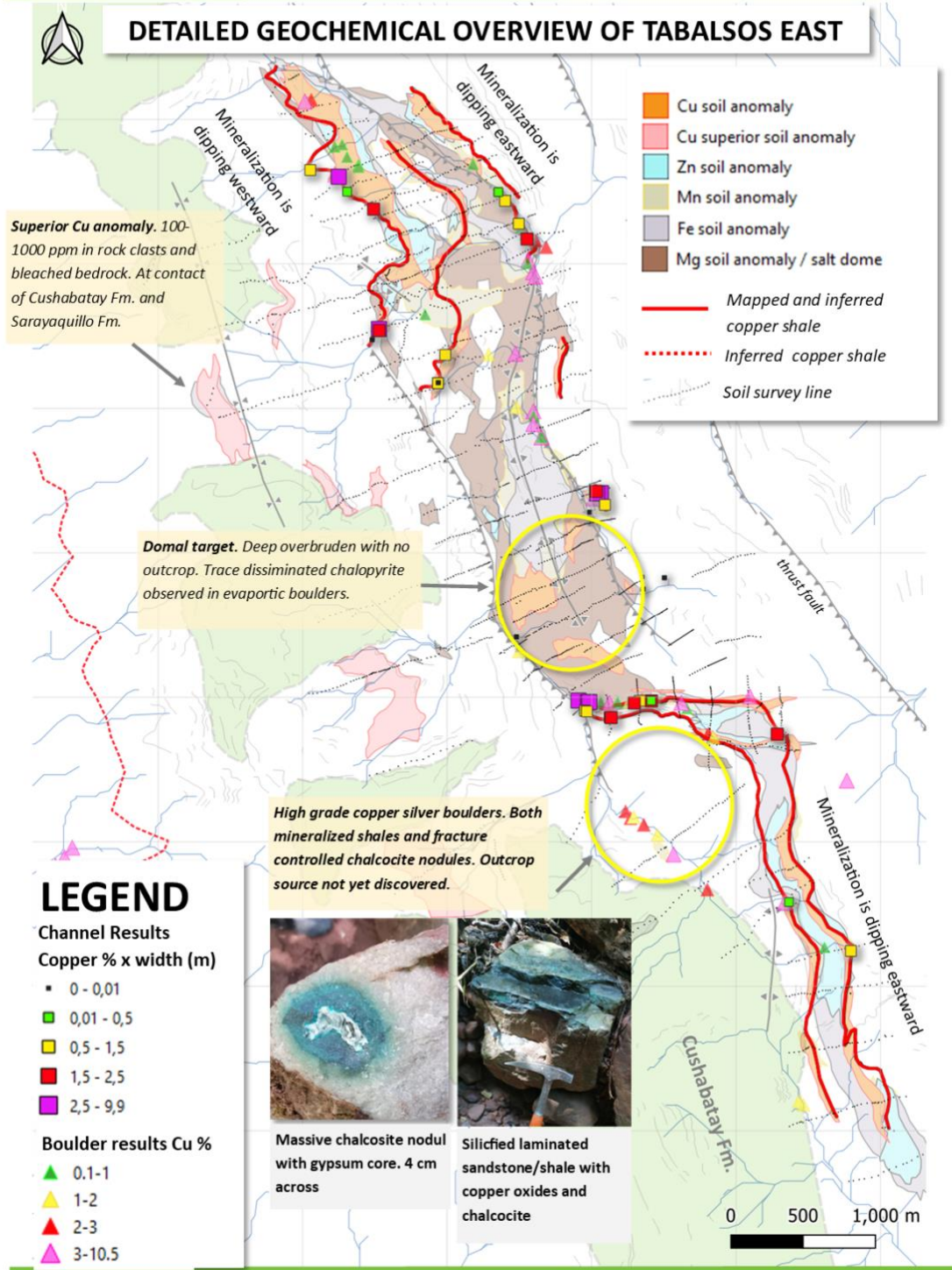


Table 1: Results from 42 out of total 53 channel samples from Tabalosos East reported through August 2021 to current date. Lower cut >0.5 % copper. Channel samples average of 1.0 metre @ 2.1% copper and 29 g/t silver.

| <b>Channel ID</b> | <b>Width (m)</b> | <b>Cu %</b> | <b>Ag g/t</b> | <b>Reported date</b>      |
|-------------------|------------------|-------------|---------------|---------------------------|
| <b>23760</b>      | 2.0              | 4.9         | 62            | <a href="#">9-Aug-21</a>  |
| <b>3861</b>       | 2.8              | 3.3         | 49            | <a href="#">20-Sep-21</a> |
| <b>3803</b>       | 2.2              | 4.1         | 47            | <a href="#">9-Aug-21</a>  |
| <b>23999</b>      | 1.2              | 5.4         | 62            | <a href="#">9-Aug-21</a>  |
| <b>109</b>        | 1.5              | 4.0         | 36            | here                      |
| <b>3823</b>       | 1.3              | 3.5         | 86            | <a href="#">9-Aug-21</a>  |
| <b>3892</b>       | 1.0              | 4.3         | 53            | here                      |
| <b>23758</b>      | 2.6              | 1.1         | 12            | here                      |
| <b>102</b>        | 3.1              | 0.8         | 10            | here                      |
| <b>4310</b>       | 0.9              | 2.7         | 39            | here                      |
| <b>23793</b>      | 1.0              | 2.3         | 21            | here                      |
| <b>3862</b>       | 2.0              | 1.1         | 14            | <a href="#">20-Sep-21</a> |
| <b>23992</b>      | 2.0              | 1.0         | 19            | here                      |
| <b>4313</b>       | 1.7              | 1.2         | 27            | here                      |
| <b>3888</b>       | 0.8              | 2.3         | 24            | <a href="#">9-Aug-21</a>  |
| <b>118</b>        | 0.8              | 2.3         | 24            | here                      |
| <b>3896</b>       | 1.0              | 1.7         | 19            | here                      |
| <b>23780</b>      | 0.2              | 6.9         | 89            | here                      |
| <b>4309</b>       | 0.4              | 3.4         | 30            | here                      |
| <b>114</b>        | 0.6              | 2.2         | 43            | here                      |
| <b>3819</b>       | 0.5              | 2.6         | 53            | <a href="#">9-Aug-21</a>  |
| <b>3821</b>       | 1.8              | 0.7         | 12            | <a href="#">9-Aug-21</a>  |
| <b>23781</b>      | 0.2              | 6.0         | 63            | here                      |
| <b>23784</b>      | 0.6              | 1.8         | 30            | here                      |
| <b>23993</b>      | 0.5              | 2.0         | 35            | here                      |
| <b>3814</b>       | 1.2              | 0.8         | 16            | <a href="#">9-Aug-21</a>  |
| <b>23787</b>      | 0.7              | 1.3         | 13            | here                      |
| <b>4516</b>       | 0.2              | 6.1         | 158           | here                      |
| <b>3806</b>       | 1.0              | 0.9         | 9             | <a href="#">9-Aug-21</a>  |
| <b>3846</b>       | 1.0              | 0.9         | 10            | here                      |
| <b>4507</b>       | 0.4              | 2.1         | 29            | here                      |
| <b>23998</b>      | 0.7              | 1.0         | 11            | <a href="#">9-Aug-21</a>  |
| <b>23991</b>      | 1.2              | 0.5         | 7             | here                      |
| <b>3858</b>       | 0.2              | 2.2         | 27            | here                      |
| <b>23762</b>      | 0.4              | 1.0         | 19            | <a href="#">9-Aug-21</a>  |
| <b>23786</b>      | 0.5              | 0.8         | 9             | here                      |
| <b>23789</b>      | 0.7              | 0.5         | 4             | here                      |
| <b>7</b>          | 0.5              | 0.6         | 8             | here                      |
| <b>23778</b>      | 0.2              | 1.2         | 12            | here                      |
| <b>4508</b>       | 0.4              | 0.6         | 7             | here                      |
| <b>3853</b>       | 0.4              | 0.5         | 8             | here                      |
| <b>106</b>        | 0.2              | 0.8         | 18            | here                      |