

LME Warehousing Logistics Review

Findings

November 2014



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1. Scope of the report

1.1. Origin of the report

In the Warehousing Consultation Report published in November 2013 by the LME, a number of issues were flagged for review in a separate, independent study. These issues form the subject of the work undertaken by Oliver Wyman and described in this report, the LME Warehouse Logistics Review.

The topics reviewed by Oliver Wyman relate in particular to two LME documents, the LME Policy and Guidelines for Good Delivery Points, and the LME Policy Regarding the Approval of Warehouses.

1.2. Areas covered

The Warehouse Logistics Review analyses and provides suggestions in three areas:

1. Criteria for good delivery points and warehouse approval

Review of the approval criteria used by the LME, both for good delivery points and warehouse approval. This includes creating/removing criteria, changing thresholds and clarifying concepts

2. Warehouse operations

Specialist advice in considering what could be reasonable operational expectations and requirements for warehouses for the loading-in, holding, and loading-out of metals. This includes the analysis of logistics capacity rates, the load-out definition and the main operational processes currently followed by the warehouse companies when loading-out metal. These analyses cover the question of the appropriate balance between LME delivery points/warehouses receiving-in unlimited volumes of metal as the market of last resort and delivery points/warehouses being able to meet reasonable operational requirements for the delivery of metal to owners

3. Approval process

Review of the approval process for good delivery points, warehouses and sheds. This includes the roles of committees, required documents and due diligence to be carried out during the assessment of the applications

Topics explicitly excluded from this non-legal review include (but are not limited to):

- Minimum load-out rates and the load-in/load-out mechanism
- Management of existing queues, including banning rent in queues, prioritization of certain types of metal owners, etc.
- Any measure capping the volume of metal stored, loaded-in, re-warranted, etc.
- Fees and charging practices of warehouse companies

These recommendations were made only from a logistics perspective and any potential legal considerations will have to be assessed separately by the LME.

1.3. Methodology used

To produce this report, input was gathered from the LME and from market participants:

1. Input from the LME

- a. Qualitative input: Oliver Wyman conducted multiple interviews and weekly working sessions with LME staff, mainly with the Physical Operations and Business Development teams, to gain an understanding of the current situation
- b. Quantitative input: In addition to interviews, Oliver Wyman collected data and information from the LME including metal statistics, processes, past applications, etc.

2. Input from market participants

- a. Warehouse/location site visits
Eight site visits were conducted across Europe, the US and Asia to discuss key issues directly with warehouse operators and observe operations in their warehouses. In addition, meetings and visits were conducted with three different port authorities
- b. Participation of LME committees
The review process and timing was presented to LME standing committees. In these meetings, questions and comments were noted for further investigation and the opportunity for one-on-one meetings was confirmed
- c. One-to-one sessions
As per the LME notice of March 3rd 2014 (“Invitation to market participants to engage with the LME logistical review”) to the market stakeholders, one-on-one discussions were offered by Oliver Wyman to any market stakeholder interested in presenting its view on logistics operations at the LME. Twenty-one market participants across the value chain (producers, traders, etc.) met with Oliver Wyman over the course of the work

Data and information collected were analysed by the Oliver Wyman team, which included experts in logistics, commodities trading and exchanges.

1.4. Structure of the report

The report is structured in line with the scope of the review described above, including sections on:

- Criteria for good delivery point approval
- Criteria for warehouse approval
- Logistics operations
- Approval process

For each area the same structure is used, first describing the issues, then the findings from our analysis and finally, suggestions for changes in the LME's Policy and Guidelines for Good Delivery Points, and the LME Policy Regarding the Approval of Warehouses.

1.5. Network principles

The LME looks to manage its warehouse network based on a set of principles that can be summarised as follows:

- **Low supply chain costs:** Metal going through the LME network should generate the minimum additional costs and delivery time possible vs. metal directly sourced from a producer
- **Highest liquidity:** Although locations of production and consumption evolve slowly, levels of production and consumption can vary significantly from year to year and cycles may be desynchronized across regions. The LME network should allow market force balancing mechanisms to act in the most efficient way for metal owners
- **Homogeneity of good delivery points:** From a metal owner's perspective, variance across good delivery points should be minimal (in terms of cost of service, type of infrastructure available, destinations accessible, time to access different relevant terminals, etc.) so that the metal acquired on the LME is equally accessible wherever it is stored, and does not require additional operations or costs to make it available to the owner

The analysis has been conducted and suggestions made on the basis of seeking to conform to these principles.

It should be noted that the LME does not operate the warehouse network, rather it authorises and regulates delivery points and operators. As part of its regulatory function, through the warehouse policy and guidelines, the LME imposes requirements to safeguard the integrity of the LME network. It does not, however, control the operating processes or relationship between warehouse companies and metal owners.

2. Criteria for good delivery point approval

The main criteria taken into account by the LME when assessing an application from a location to become an LME listed good delivery point include the following:

- Area of net consumption
- Logistically sound conduit
- Minimum draft
- Minimum berth loading/unloading capacity
- Container and break-bulk terminals
- Rail connection
- Good delivery point boundaries
- Inland delivery points
- Minimum number of warehouse companies when listing a new delivery point

This section lays out issues raised, findings and any suggested changes for each of these criteria.

2.1. Area of net consumption

Issues raised

The definition of area of net consumption has not been defined in the past, and this has led to some questions being raised, e.g.

- What timeframe is appropriate to be considered (from intra-year peak of consumption until consistent long-term trend of e.g. 10 years)?
- How should the notion of area be interpreted (e.g. very local vs. more global)?
- Should major trade and logistics hubs be denied good delivery status if they are not part of an area of net consumption?

Findings

Different interpretations of “area of net consumption” could potentially result in differing conclusions on whether a delivery point should be listed.

“Net consumption” would typically be indicated by a negative trade balance for the metal in question. Trade patterns typically show consistent long-term trends when examined over a multi-year period; however, metal consumption and production often have seasonal fluctuations and can be disrupted by supply or demand events. Thus trade balances should be assessed over a sufficiently long period to eliminate volatility effects.

There is no consistent definition of “area”. “Area” can be defined depending on the specific delivery point, and can cover different circumstances:

- A sub-region in the case of large countries (e.g. United States)
- A country (e.g. Germany)
- An aggregation of small countries with an integrated surface logistics network (e.g. Netherlands and Belgium)

Very large trade hubs can benefit the network by allowing flows to be consolidated and deconsolidated and support movement from one region to another (e.g. flows from Europe to Asia might go through regional hubs). Nonetheless, these locations would tend to need to be in areas of net consumption, or to remotely serve areas of net consumption (e.g. where the LME network is not directly present today), to prevent distortion of the network.

Suggested changes

We suggest making explicit the definition of “Area of net consumption” in the Policy and Guidelines for Good Delivery Points (significant negative trade balance over a consecutive two-year period, with the associated clarification of the notion of area).

2.2. Logistically sound conduit

Issues raised

Good delivery points are required in the Policy and Guidelines for Good Delivery Points to be a “logistically sound conduit”. This is not further defined however, which has raised questions of interpretation in the past.

Findings

Observation of the current network shows that two types of logistics issues can develop related to this point:

- If metal is not stored on “natural” trade lanes (e.g. trade lanes which would exist without LME warehouses), using the LME system generates additional supply chain costs vs. direct metal flows
- In the case of a demand imbalance in the world (i.e. low demand in one region and high demand in another region), metal in poorly connected delivery points will be more difficult to move to delivery points where there is more demand

Local and long distance connectivity can be taken into account in defining “logistically sound conduit”:

- Good delivery points should be positioned on a natural route to specific consumption centres to reduce additional supply chain costs. This characteristic can be assessed based on the volume of metal going through the delivery point
- Good delivery points should be well connected to different global consumption centres, to improve the ability to move the metal in case of demand shifts. This characteristic can be assessed through the number of deep sea connections (number of O/D services, frequency of services, number of shipping lines serving the good delivery point) and the volume handled by the good delivery point (both break-bulk and containers)

Suggested changes

We suggest adjusting the Policy and Guidelines for Good Delivery Points to define “logistically sound conduit” to reflect both local and long distance connectivity.

Regarding local connectivity: The delivery point should be positioned on the natural route to the consumption centres that it serves (or potential route if consumption is due to increase in future, e.g. due to the set-up of a new plant). This can be assessed through a meaningful amount of metal going through the delivery point.

Regarding long distance connectivity: To assess if a good delivery point is on a logistically sound conduit, two proxies could be used:

1. **Volume:** A relevant approximation for assessing volume handled can be TEU (Twenty-foot Equivalent Unit) handled by the port per year for containers and the volume of break-bulk handled by a port per year
2. **Connectivity:** An indicator for good accessibility could be the number of (deep sea) vessels which call at a port on a service that connects different regions of the world. This would include general cargo vessels, bulk carriers and container vessels longer than 200 metres, since these vessels frequently are ocean-going

Setting global thresholds for volume and connectivity could lead to geographic skews, because ports have different average sizes in different parts of the world – especially with regard to the many large Asian ports. Intra-region comparisons could therefore be used to evaluate ports.

2.3. Minimum draft

Issues raised

The current minimum berth draft of terminals at the good delivery points is 8 metres, which is insufficient for some common container and bulk vessels.

Classes of container vessels that have a deeper draft than the current LME requirement include Feeder (10 m), Feedermax (11 m), Panamax (12 m), New Panamax/Post Panamax (15 m) and ULCV (> 15 m). On the bulk carrier side, these are Handysize (10 m), Handymax (11 m), Panamax (12 m), Capesize (15 m) and VLBC (> 15 m).

A large part of the world's bulk carrier fleet and container vessel fleet have a draft of up to 11 metres:

- For container traffic, we estimate that Feeder (draft of up to 10 meters) and Feedermax (draft of up to 11 meters) have an approximate ~40% share of the worldwide fleet and capacity of 1,000-3,000 TEU (only approximately ~20% of worldwide container vessels are smaller than Feeder class¹)
- For bulk traffic, we estimate that Handysize (draft of up to 10 meters) and Handymax (draft of up to 11 meters) make up approximately 60% of the fleet²

These vessels have a length of up to 200 metres and a typical deadweight between 10,000 and 50,000 tonnes. All mentioned classes usually serve global and regional trade lanes.

Findings

To enhance connectivity across good delivery points and between good delivery points and consumers, listed ports would ideally provide access to the most prevalent cargo and container vessels.

Note that draft not only applies to the berth, but to all of the access routes up to the berth (e.g. river draft, channel draft), and where there could be issues of overdraft, (e.g. bridges over rivers).

Suggested changes

For new delivery point applications, we recommend increasing the minimum draft capabilities of LME ports at approval to 11 metres to allow for these dominant ship classes. This draft requirement does not apply for inland delivery points.

¹ Worldshipping.org/bulkcarrierguide.com

² MAN: Bulklers – Propulsion Trends in Bulk Carriers

2.4. Minimum berth capacity

Issues raised

The LME currently requires berth capacity of three berths each with 1,500 tonnes of capacity per day at each delivery point. The question has been raised whether this is sufficient to handle metal coming to or leaving the delivery point, or if there is a risk of bottlenecks developing, which would contribute to queues.

Findings

Two different approaches were used to assess this requirement:

- Discussion with market participants: none reported capacity constraints at water terminals
- Analysis of volumes handled at ports (especially in ports where we know that there are more than 4,500 tonnes/per day of capacity): estimates of daily berth use over the past 8 years showed average load-in/load-out most of the time was below 4,500 tonnes per day. There were only two years of exception for one port, out of the ~35 LME good delivery points

Suggested changes

We do not suggest changing the minimum requirement of 3 x 1,500 tonnes of capacity per day as part of this logistics review.

2.5. Container and break-bulk capabilities

Issues raised

The question has been raised whether the LME should ease the break-bulk requirement for terminals in some regions (principally in Asia where container shipments were reported to account for more than 95% of maritime flows).

In addition, there is no definition of capability (for container or for break-bulk). This could range from a dedicated berth equipped with fixed quay cranes and dealing with a very significant traffic to a generalist berth where vessels can load/unload with their own cranes, but scarcely used in practice.

Findings

In North America and in Europe, break-bulk shipments for metal are still very popular despite the worldwide growth of containerized transport. In Asia, the share of break-bulk is much lower. However, even in Asia, break-bulk shipments are still used by some specific producers and some metal owners when they cancel large volumes of warrants.

For the requirement to be relevant, it should not refer to the theoretical possibility of break-bulk being offered to metal owners, but to a real option with efficient operations and significant sea connections. A delivery point that can support either container or break-bulk would need to have at least one, functional, dedicated berth with relevant quay fixed equipment (e.g. cranes).

Suggested change

We do not suggest changing the requirement for container and break-bulk terminals.

When assessing these capabilities in a given port, the LME could consider criteria such as dedicated berths and fixed equipment, and look for evidence that these are functional .

2.6. Rail connection requirements

Issues raised

Currently, the Policy and Guidelines for Good Delivery Points may require good delivery points to have rail connectivity.

Findings

In 2005, the LME carried out a survey among the warehouse companies in order to estimate the modal split (inbound and outbound) by delivery point. Since modal splits evolve relatively slowly over time, this data could still be used as a good proxy for the need for rail across countries. In particular, this data shows that the usage of rail differs widely by region, and even within regions in the case of Europe:

Continent	Country	Rail usage
Asia	Japan	No
	Malaysia	No
	Singapore	No
	South Korea	No
	Taiwan	No
Europe	Belgium	Yes
	Germany	Yes
	Italy	No
	Netherlands	Yes
	Spain	No
	Sweden	Yes
	Turkey	No
	UK	No
Middle East	UAE	No
North America	USA	Yes

In addition, when receiving an application from a delivery point situated in a new country, a specific study (independent from the data provided by the applicant) would be needed to determine if rail is required.

Suggested changes

We suggest specifying in the Policy and Guidelines for Good Delivery Points that:

- For existing good delivery points, rail connectivity is currently required in Western Europe (i.e. Germany, Belgium, Netherlands and Sweden) and in the US.
- Every time a delivery point applies from a new country/region within a country, a specific study could be carried out by the LME itself to assess the need for rail.

2.7. Good delivery point boundaries

Issues raised

Questions have been raised on the criteria used to determine the permitted geographical locations of warehouses at different good delivery points. This issue impacts the initial approval process and was raised in discussions with operators around the potential to expand boundaries to include new warehouses.

Findings

Good delivery point boundaries are set by the LME with the intention of:

- There being enough storage capacity at the good delivery point
- Being neutral for metal owners in terms of time and cost to access a water or rail terminal (i.e. a shed further away from the terminal should offer the same characteristics in terms of cost and connections as a shed close to the terminal)

Boundaries are typically determined by the port's fixed boundaries. Where no defined port boundaries exist, the LME has typically defined the boundaries in the application process.

Given the many intrinsic differences across delivery points, setting specific rules in advance for boundary setting is challenging. A case by case approach could nonetheless rely upon a common set of factors that are consistently taken into account, such as:

- Existence of free trade zones
- Availability of sheds/storage capacity within the current boundaries
- Distance and drive time from potential locations to terminals (containers/break-bulk, barge or rail terminals)
- Lack of congestion or potential bottlenecks (e.g. bridge with limited capacity) between potential locations and the different terminals
- Accessibility from any location to the highway network

In the case of expansion requests, increments of a small distance could be used so the profile of a delivery point is not substantially modified.

Suggested changes

We suggest clarifying that good delivery point boundaries should be reassessed in exceptional circumstances only, and only where there is a major shortage of storage capacity. The existing good delivery point boundaries would be considered as the starting point, with small increments used to determine boundary expansion.

The enquirer (e.g. warehouse company, port authority, etc.) would need to demonstrate the shortage of storage capacity before any review by the LME.

2.8. Inland delivery points

Issues raised

Although it mentions inland delivery points, the current Policy and Guidelines for Good Delivery Points does not lay out specific rules for their approval or operation.

The LME network is historically built around sea ports, which are receiving places for metal, but also places from which it is easy – if required by market circumstances – to reship metal to other places in the world. In addition, ports are usually well connected to inland transport networks (e.g. highway, rail, barging).

Findings

Some metal trade lanes, including major ones (e.g. Canada to the US for aluminium) are predominantly land based. These trade lanes cannot be served by storage facilities at ports without significant/costly detours. It is appropriate for inland warehouse locations to serve these very large routes. Nonetheless, an efficient network requires that the delivery points have excellent connectivity.

A set of criteria could therefore be applied to the approval of inland delivery points to maintain the efficiency of the network, including the following

- Natural position on a pure inland trade lane
- High connectivity (by road, rail, barge), including to both consumption areas and relevant ports of export in the region
- Capacity to handle large shipments by rail or barge
- Minimisation of transportation cost and time from warehouse to consumer and mitigation for local specificities (e.g. driver shortages, rail operations and infrastructure limitations)

If there are port delivery points on the same trade route, these could be chosen as LME delivery points instead of the inland delivery point.

Suggested changes

We suggest defining more clearly what an inland delivery point is and explicitly stating the requirements for approval of inland delivery points in the Policy and Guidelines for Good Delivery Points.

Inland delivery points could be defined as a location away from the sea without direct short-sea and deep-sea connections.

Requirements for inland delivery points could include:

- Location on a large inland trade lane (a route naturally taken by the metal from the area of production to the area of consumption, which only goes via land and which never runs through ports that are LME adequate)
- The same capacity requirements as for ports (4,500 tonnes per weather working day), achieved through rail and barge capacity
- Barge and rail connections

2.9. Minimum number of warehouses when listing a delivery point

Issues raised

The current Policy and Guidelines for Good Delivery Points – when assessing a good delivery point application – states that having two warehouse companies is the “preferred” option for the LME.

This language was adopted to encourage competition within a good delivery point, and therefore foster an environment for competitive fees and high service quality. Nonetheless, some good delivery points are listed that have only one operating warehouse company.

Findings

For a new delivery point, the desire of multiple warehouse companies to list in a delivery point can demonstrate a greater belief in the port as an important conduit in the global metal supply chain.

Having multiple operators from the beginning of its listing can help create competition within the good delivery point. There is not a specific formula that would give the right number of operators in a delivery point – this is rather a trade-off between the benefits of competition, operational feasibility and demand potential.

Suggested changes

For new applications of good delivery points, we propose adjusting the Policy and Guidelines for Good Delivery Points to specify that:

- More than one warehouse company by delivery point is the preferred option for the LME
- To be listed it must be possible for a delivery point to have more than one operating warehouse company

3. Revised criteria for warehouse approval

This section assesses issues raised around some of the criteria used to approve a warehouse company, including:

- Dominant infrastructure providers
- Warehouse companies applying for the first time
- Rail connectivity at the shed level

3.1. Dominant infrastructure providers

Issues raised

Companies that own or operate a significant amount of the infrastructure services in a certain delivery point may apply to operate an LME warehouse. A company may control one or more of the various different operations and services that are provided in a given delivery point including, for example:

- A terminal operator which operates all or most of the berths of a port
- A logistics company providing all or most of the logistics services in the port (haulage and warehouse operations)
- A company that owns all or most of the real estate/warehouses of the delivery point

In such circumstances there may be concerns regarding the extent of competition in the relevant areas, now and in the future.

Findings

Listing as an LME warehouse company an entity that controls services that are critical to other warehouse operators could be an issue if it disadvantages other warehouse companies.

This situation could lead to upward pressures on logistics fees, undue catchment of flows based on price or service advantages and possible exclusion of third parties from opening warehouses.

Suggested changes

We suggest the LME should consider whether the policy regarding the approval of warehouses can be amended such that (whilst due consideration is given to all applicants), the LME would not approve warehouse providers that:

- Control the operation of any infrastructure or the provision of any service in the delivery point that is believed to be critical to other warehouse companies in the delivery point concerned

- And where the LME has a genuine concern that the applicant's operation of an LME warehouse could be detrimental to competition.

3.2. Warehouse companies applying for the first time

Issues raised

Storing metal requires specific expertise, and LME operations add peculiarities (e.g. warranting operations in the system, lotting of metal in warrants) where additional knowledge is required.

Whilst listing a warehouse company that is new to the LME network can bring in more competition and broaden the range of options for metal owners, there is a risk that operations might not meet the LME's objective requirements and standards (for example, errors in warranting operations, delay in operations, etc.). In addition, although it is possible to delist a company that is not meeting the LME requirements and standards, the process has an impact on market participants and should be minimised where possible.

Findings

The LME can encourage new warehouse companies to apply while setting requirements to minimise operational risks. In particular, it can monitor the LME specific processes (e.g. warranting of lots) and try to ensure they are followed during the first years when a new warehouse company is approved in the network.

Suggested changes

For new applications going forward, we suggest making changes to the LME Policy Regarding the Approval of Warehouses for any company that is listed for the first time in the LME network:

- Require some key operating staff of the applicant to have good systems and metals experience to enable seamless integration into the LME network
- Create a probation period of two years to monitor whether operations are carried out according to the LME standard. During or at the end of this period, the LME would have the right to suspend or delist the warehouse company on three months' notice where it reasonably believes that the warehouse company is unable to comply with any relevant requirements. In case the LME decides to delist the warehouse company, the latter would be bound by the obligations of a company delisting

3.3. Rail connectivity at the shed level

Issues raised

Currently, a rail connection is required for all warehouses in certain regions. This requirement aims to increase throughput capacity and homogeneity of shed profiles, and lower load-out rates (although rents might be higher due to higher fixed costs, as a result of investment in rail spurs).

However, in some delivery points there may be a lack of sheds with rail access, which can form a barrier to entry (or one warehouse company could acquire all warehouses with rail spurs). Also, investing in a rail connection to a warehouse is a significant capital investment.

Findings

For ocean port delivery points, removing the requirement for a rail connection at the shed level could potentially help increase competition in some circumstances.

When listing a new shed which does not have rail access, the rail terminal to be used by that shed would need to have capacity for the extra metal volume. In addition, there would need to be an obligation on the part of the warehouse company to return the metal to the rail terminal when asked by the customer.

In inland delivery points, rail connections are important since rail is a key component of connectivity, especially for large shipments. In this case, the obligation of rail spurs at the shed level must be maintained.

Suggested changes

For the new applications of warehouses going forward, we suggest easing the rail requirement at the shed level (provided that the country has a rail requirement as described in section 2.6), and replacing this requirement by the following new criteria:

- For ocean port delivery points, warehouses without direct rail connections will be considered for listing if it can be demonstrated that adequate shuttle services to the railhead can be provided by the warehouse company at its own cost and risk
- However, for inland delivery points, rail should still be required at the shed level

4. Operations

This section reviews some key elements of operations and processes at warehouse companies:

- Logistics productivity (in terms of load-in, storage and load-out)
- Load-out definition
- Slot characteristics (slot scheduling process, management of dynamic queues, slot time windows, responsibility sharing between the metal owner and the warehouse company)
- Logistics rates structure

4.1. Logistics productivity

Issues raised

The question was raised to what extent productivity of warehouses varies and whether steps could be taken by the LME to improve warehouse productivity.

Findings

During the course of the study, short site visits were made by Oliver Wyman to eight warehouse companies and locations.

A range of general and local factors can be seen to have an influence on productivity, including:

- Warehouse configuration: number of doors, space occupancy, number of bundles in height and sorting, stacking, storage and systems efficiency
- Warehouse operations: efficiency levels in operating, assets per m² (forklifts, workers), allocation of assets and services in/around the warehouse, scheduling practices
- Modal availabilities: availabilities of pre-ordered rail sets, frequency of exchanging rail sets, trucking capacity
- Cancellation patterns: unitized vs. large batches
- Other: weather conditions, illnesses

The LME regulates a third party network. Warehouse companies make their own trade-off between efficiency and operating costs. In general, increasing the load-out rate generates some additional costs (related to investment or operating processes), or foregone revenue (related to looser storage patterns for instance).

The key point for the LME and the market is whether the warehouse company is meeting expectations in terms of delivery capacity (poor productivity does not necessarily compromise this objective).

Rules around process or efficiency standards could be difficult to define, with the need to take into account differences in local conditions and practices, and may be challenging to enforce. Given this, it is appropriate that warehouse companies are primarily steered through an obligation of results.

Nonetheless, based on our discussions with market participants, site visits and prior experience, we have observed a number of good practices that, if followed, could help improve logistics productivity.

Suggested changes

We do not recommend any change in the LME Policy Regarding the Approval of Warehouses related to this point.

However, we suggest that the LME continue to identify and communicate good practices, and encourage warehouse companies to implement them to improve the overall efficiency of the network. An initial, non-exhaustive, list of good observed practices is shown below:

Load-in	Initial staging of metal	<ul style="list-style-type: none"> • Metal coming from the same shipment stored together
	Time of operations	<ul style="list-style-type: none"> • Load-in operations (e.g., weighting and lotting) performed at a time different from load-out operations (e.g., 2nd shift or at night)
Storage	Space	<ul style="list-style-type: none"> • 65% (not 80%) of warehouse floor space for storage • Outside loading space equivalent to 50% of warehouse space
	Vertical storage	<ul style="list-style-type: none"> • 3 or 4 heights for Aluminium (not 5-6 heights)
Load-out	Load-out preparation	<ul style="list-style-type: none"> • Pre-staging of metal close to the loading area • Optimisation of dig-out in advance (up to one week in case of queues) • Sequence of order of warrants for load-out based on dig-out minimization
	Loading	<ul style="list-style-type: none"> • Loading of trailers in advance (i.e., before the tractor arrives) • Time window of truck loading (e.g., 3-hour)
	Labour and assets	<ul style="list-style-type: none"> • 2 forklifts for loading a truck / railcar / container • Staff assigned to a warehouse for a specific day – avoid inter-sheds transport

4.2. Appropriate balance between load-in and load-out volumes

Issues raised

The study scope raised the question as to the appropriate balance between LME delivery points/warehouses receiving-in unlimited volumes of metal as the market of last resort and delivery points/warehouses being able to meet reasonable operational requirements for the delivery of metal to owners.

Findings

From a logistics perspective, load-in and load-out processes have some key differences that help warehouses to manage the balance between acting as market of last resort and the delivery out of metal:

- Transport modes: inbound metal comes through modes of transport allowing high capacity (i.e. break-bulk/containers for ports delivery point or rail for inland delivery point). Outbound metal is most often shipped out by truck or by vessel. The capacity of the ports used by the LME will typically be sufficient to prevent any bottleneck in inbound metal
- Scheduling: load-out is typically scheduled out during regular business hours so that trucks can easily come and pick-up the metal. For load-in, metal can arrive at any time in the day and be stored in the yards or in the warehouse. Lotting and storage of the metal can be made by the warehouse employees at any time, including during night shifts
- Timing of operations: discussions with warehouse companies suggest that load-out is commonly performed in the morning shift, whereas load-in is performed during the afternoon shift. Although load-in and load-out require the same equipment (e.g. forklift) or the same circulating areas within a warehouse (doors, intermediate storage), these can be carried out at a different time of the day

We also note that – by allowing multiple delivery points/warehouse companies/sheds – the LME system allows some natural balances between load-in and load-out:

- For a warehouse operator which owns multiple warehouses in a given delivery point, it is not uncommon that for a given day, load-out only concerns a limited number of sheds: as a result, it can load-in in the sheds which are not busy with loading-out
- A metal owner, wanting to load-in metal in a specific delivery point, can choose to load-in its metal at a warehouse company which is not busy with high load-out volumes
- In addition, in some geographies where the LME network is dense, the metal owner can also choose to load-in his metal in a delivery point close to the one it had initially planned

Although the two latter cases may mean that the metal owner has less choice, they still aid the capacity of the LME to play its role of market of last resort.

Finally, the envisioned Linked Load-in Load-out (LILO) rule would link the minimum load-out requirements with the volume of metal loaded-in (where the queue is above 50 days and load-in volumes were above load-out volumes during the previous calculation period). With this new rule, a high volume of metal loaded-in eventually translates into an additional load-out, which incentivizes the warehouse to only accept load-in volumes that generate manageable additional load-out requirements.

Suggested change

We do not recommend any change related to this point based on the logistics review.

4.3. Load-out definition

Under the current set of rules, there is no official definition of a load-out, although a delivery to a consignee outside the premise of the warehouse company is the usual practice.

We have reviewed load-out situations described as problematic by market participants and made suggestions or otherwise to the load-out definition. However, this question sometimes goes beyond the bound of the Logistics Review, and might require further work on the part of the LME.

4.3.1. Circular load-out/load-in

Issues raised

“Circular” load-out/load-in can occur when a warrant is cancelled, the metal is loaded-out and is then loaded-in at the same warehouse company in the same good delivery point.

Circular load-out/load-ins can use load-out slots and therefore feed queues.

Findings

Although there are some cases where a load-out is immediately followed by a load-in due to market conditions (e.g. sudden reversal of prices), these behaviours would tend not to serve consumer or trading purposes and could help sustain queues.

Suggested change

We suggest adapting the LME Policy Regarding the Approval of Warehouses such that, to count as a load-out, a load-out should be accompanied by a bill of lading (or equivalent for other transport modes, e.g. for road shipping, CMR in Europe or waybill in the US).

4.3.2. Warrants cancelled but not scheduled for load-out

Issues raised

Currently, warrants that are cancelled are not always scheduled for load-out.

The LME does not put any obligation on the metal owner to request a slot when the warrant is cancelled. Warehouse companies also usually require the metal owner’s instructions (and in some cases FoT and rent payment) before allocating them a slot (i.e. it is not an automatic process).

When cancelled metal is then scheduled for load-out, there is the risk that a queue can be created instantly (since there is no restriction on the amount of metal scheduled for load-out once the warrant is cancelled).

Findings

There is little difference in this scenario to the risk of a metal owner cancelling a large number of warrants and scheduling them for delivery right away. A metal owner can cancel and schedule for delivery as much metal as it wants, even in large volumes (e.g. winding down of a large position). Since there is no restriction in the number of warrants that can be cancelled, the described situation could equally happen in the normal course of activity.

Suggested changes

We do not suggest any change in the logistics rules related to this point as part of the scope of this review.

4.3.3. *Transfer of metal between warehouse companies within the same good delivery point or across good delivery points*

Issues raised

Some metal flows are constituted by flows from warehouse companies to other warehouse companies, instead of going to a consumption point. This can occur within the same good delivery point or across good delivery points.

Findings

As long as these flows are triggered by a decision and mutual agreement of metal owners, there is no compelling reason to prohibit them. In addition, the envisioned LIFO rule might reduce the attractiveness of such flows for warehouse companies with queues.

Suggested change

We do not suggest any change in the logistics rules related to this point as part of the scope of this review.

4.3.4. *Warrants blocked in rent deals*

Issues raised

Some warehouse companies are storing significant volume of metal which is not available for load-out in the LME system because attractive rents are proposed to the metal owner if it leaves its metal in the warehouse for a certain period of time.

Findings

From a pure logistics perspective, this possibility does not seem to have significant harmful effects.

Suggested changes

We do not suggest any change in the logistics rules related to this point as part of the scope of this review.

4.3.5. *Metal concentration by metal owners*

Issues raised

Some metal owners, whether producers or traders, might choose to concentrate their metal in a limited number of places. The risk is that this may create queues when large numbers of warrants are released and start being loaded-out by new owners.

Findings

Decisions on the use of good delivery points by metal owners are beyond the scope of this logistics review.

However, a network with well-connected good delivery points reduces the effects of accumulation in specific delivery points, by ensuring that metal is accessible from anywhere in the world in a convenient and affordable way.

Suggested changes

We do not suggest any change in the logistics rules related to this point as part of the scope of this review.

4.3.6. *Metal attraction through incentives*

Issues raised

As explained in the LME's previous report ("LME Warehousing Consultation"), incentive payments have been a central element of the warehousing system. As a result, some warehouse companies have been able to attract more metal in some specific delivery points.

Findings

Incentives payments are out of bounds for this logistics review.

A network with well-connected good delivery points should reduce the effects of accumulation of metal in specific delivery points, by ensuring that metal is accessible from anywhere in the world in a convenient and affordable way.

Suggested changes

We do not suggest any change in the logistics rules related to this point as part of the scope of this review.

4.3.7. Containers ready for departure

Issues raised

In certain cases, metal can be loaded into a container, which is then sealed (i.e. ready for departure from an administrative and custom perspective) but not leave the premises for several days. If the load-out is only counted when the container leaves the premises, the warehouse should have a day during which it records a lower load-out rate, and potentially less than the minimum requirement.

Findings

A sealed container is ready for departure and – in normal circumstances – cannot be re-opened by the warehouse company. As such, it could be counted as a load-out on the day that it is sealed.

However, if the number of sealed containers in the yards increases significantly, it might create some bottleneck effects (due to yard over-occupancy or traffic of trucks if all the containers are picked up on the same day) and ultimately disturb operations on the following days. As such, the warehouse companies cannot be entitled to use the excuse of a high number of sealed containers to justify lower load-out rates on following days.

Suggested changes

Sealed containers in the yards could be counted as a load-out by the warehouse companies on the day they are sealed. However, any subsequent movement of the containers should have no impact on any future delivery out.

4.3.8. Off-LME storage in the same facility

Issues raised

Some warehouse companies have mentioned that – after loading-out metal – they should be allowed to store it off-LME in the same facility for later delivery instead of delivering it to another place right away. The associated benefits mentioned may include:

- A cheaper service for customers with metal in the facility
- Allowing owners to ship metal at a date later than initially planned
- Staging metal in case of missed slots by the metal owner

Findings

The expected benefits for metal owners are not proven:

- Regarding cheaper service: The warehouse company usually has the option to offer a cheaper rent at any time (including after warrant cancellation). In addition, due to the current structure of the rent charges (of which a large part is reported to be constituted of incentive payments), warehouse companies have the option to decrease their rents, even without considering outside storage
- Regarding later slots: There is no rule from the LME that prohibits warehouse companies from postponing delivery slots. As described in section 4.5, warehouse companies are entitled to charge for this extra service when it is requested by the metal owner
- Regarding missed slots: The current volumes suggest that missed slots are very low, and warehouse companies are usually able to catch up in the following days. In addition, a clearer definition of responsibility sharing, including the obligations of metal owners, could help reduce the risk of missed slots increasing in the future

In addition, allowing the storing of metal off-LME would make it difficult for the LME to track metal in order to prevent it being put on warrant again at the same warehouse/good delivery point.

Suggested changes

Given the reasons described above, we do not suggest implementing this proposition as part of this logistics review.

4.4. Slot characteristics

4.4.1. *Slot scheduling workflow*

Issues raised

Slot scheduling is carried out in a heterogeneous way across warehouse companies and good delivery points. Metal owners therefore need to complete different documents, have different types and phasing of interactions in the load-out process. This can create additional complexity and requires more time and effort.

Within the workflow, an issue has also been raised around how and when rent and load-out rates should be charged when metal is in a queue.

Findings

From a logistics perspective, a common load-out process would simplify operations and help metal owners. All elements required to organise the shipment would be known in advance providing greater readiness and the potential to optimise operations. However, given the different operating environments, duty/tax rules, legal

structures and legacy approaches, shifting to a single process may be a complex undertaking and flexibility for local circumstances may nonetheless still be required.

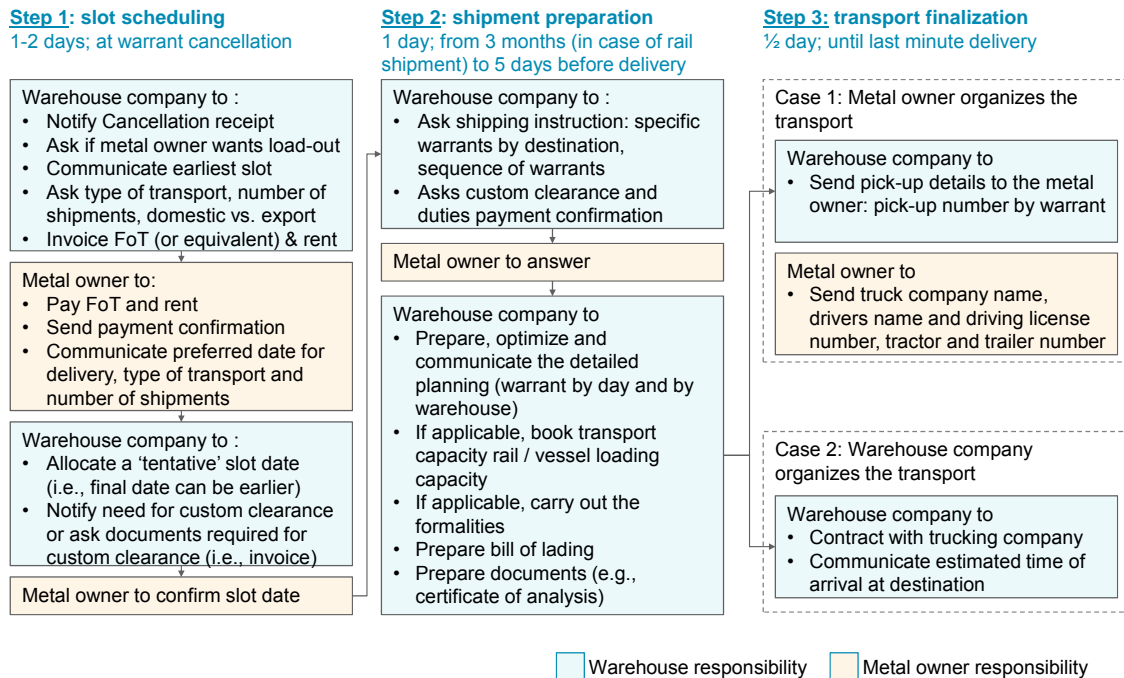
In terms of charges for load-out and rent, we would consider the following practice to be a balance between the interests of the warehouse company and metal owner:

- That no more than the load-out rate charged by the warehouse operator at the time the warrant is surrendered (i.e. FoT or equivalent) is charged for delivery, regardless of whether or not the warehouse operator has subsequently increased his rates prior to the actual load-out
- That the load-out rates (i.e. FoT or equivalent) are charged upfront, as a condition of slot allocation

Suggested changes

We suggest that warehouse companies are each asked to publish on their website their slot scheduling workflow (scheduling of the slot, organization of the shipment and metal delivery itself).

To lay out how the process is organised, we have provided a high-level framework, below, as an example of what could be published by the warehouse companies. This incorporates the setting and payment of load-out rates at the point of cancellation.



4.4.2. Management of dynamic queues (subject to the implementation of the envisioned LILO rule)

At the time of writing, the envisioned LILO rule has not been implemented; this section is only relevant if this LILO rule (or similar) is ever implemented in the future.

Issues raised

In the event of the implementation of the envisioned LILO rule, affected warehouses under the new LILO rule (i.e. queues above 50 days and load-in above load-out volumes during the previous calculation period) should see an increase in their minimum load-out requirements assuming they continue to load-in metal. Since load-out planning is done in advance, it means that they will have to dynamically add and fill new load-out slots to their original plan.

There are different ways of filling these slots: moving forward the whole queue, moving forward only a part of the queue (i.e. after a certain time in the queue) or moving forward only the end of the queue (until all the slots are filled). In particular, the last two options reduce the administrative burden for warehouses (calling metal owners, rewriting bills of lading, rescheduling transport when arranged for the metal owner by the warehouse company, etc.).

Findings

At the core of the load-out logic is the obligation of loading out metal in the order of slot scheduling. This principle promotes fairness of treatment for all metal owners. The new LILO rule should not challenge this principle. Therefore, a warehouse company should offer additional load-out slots to metal owners based on their position in the queue.

However, moving forward the whole queue will require significant administrative operations (need to call all metal owners, re-issue bills of lading). Whilst it increases workload, we see it as part of the adjustment required on the part of the warehouse companies.

It should be noted that capacity (mainly loading platforms) for loading railcars might be already used. However, warehouse companies should treat all modes equally and might need to increase rail loading platform capacity, increase the number of shifts per day or truck the metal to another rail spur.

Suggested changes

In the event of the implementation of the envisioned LILO rules, we suggest setting as a standard rule the obligation to offer additional slots created by the “additional minimum requirements” of the new LILO rule to all metal owners based on their position in the queue.

4.4.3. Slot time window

Issues raised

The slot time window offered to metal owners is the decision of each warehouse company. Therefore, it has led to the question of whether the warehouse companies could offer slots at some times that would be difficult to meet for metal owners.

Findings

Discussions with different market participants suggest that warehouse companies usually use the morning shift (i.e. around 7:00 to 15:00) for load-out. In the afternoon, either there is no activity, or the shift is used for preparing the load-out for the next day. However, slot time windows also depend on various factors which vary due to geography (e.g. daylight) or market characteristics (e.g. US over-the-road drivers usually take metal as a back-haul on their way back from ports and cannot take delivery of the metal too early nor too late, to avoid sleeping in the city of collection).

As a result of the various factors effecting slot windows, it seems difficult to issue general guidance on this aspect. However, in case of abuse observed/reported (i.e. only very early slots or very late slots proposed), the LME might recommend specific practices:

- Separate load-out preparation (afternoon shift of the previous day) and delivery (morning shift). This would reduce the movement of forklifts in warehouses
- Prioritize over-the-road drivers for slots in the middle of the day and incentivize local delivery (for other warehouses in the same good delivery point) to take place in early or late slots
- If not implemented, set up a time window (from 1 to 3 hours) when a truck is entitled to show up. This would also apply for trucks with load-in volumes

Suggested changes

We do not recommend any change related to this point. The LME will have to monitor and act on a case by case basis depending on the complaints that are addressed to the Physical Operations team.

In case of an abnormally high number of missed slots that can be attributable to the behaviour of the warehouse company, we suggest that this volume should not be counted as loaded-out: the warehouse company should reschedule the delivery at the earliest possible time.

4.4.4. Responsibility sharing

Issues raised

The load-out of metal is an operation involving both the warehouse company and the metal owner. The efficiency of this process depends on both the warehouse company and the metal owners.

Findings

The Warehousing Agreement is an agreement between the LME and each warehouse company; as such, no obligations are placed on the metal owner in the agreement. Nevertheless, it may be appropriate to issue some recommendations and guidance in relation to best practice for metal owners to increase logistics efficiency.

Observations from current practices (including as suggested by the illustrative process for slot scheduling – section 4.4.1) provide examples of best practices for metal owners. This could include the following (note, delays are referred to for warehouses with queues only – warehouses without queues might be able to perform all these operations in one or two days)

- At cancellation, provide all the documents required to be allocated a delivery slot:
 - Communicate preferred date of delivery, type of transport and number of shipments
 - Payment confirmation (FoT or equivalent and rent)
- At least five days before the shipment (and more in the case of rail shipping, which might require the warehouse company to book railcars with more advance notice)
 - Provide detailed shipping instructions: specific warrants by destination, sequence of warrants
 - If necessary, carry out the formalities (e.g. custom clearance, VAT payment, etc.) or ask the warehouse company to do them on its behalf

In the case of a truck arranged by the metal owner:

- At least before 12:00 on the previous day
 - Send truck company name, driver's name and driving license number, tractor and trailer number
 - If requested by the warehouse company, indicate the delivery time window for picking up the metal (typically a 3-hour time window)
- At the arrival of the truck at the warehouse
 - The driver should notify the warehouse on the arrival of the truck
 - The driver's information should be consistent with the information communicated in advance
- At reception of metal, the driver should check the lot numbers and sign the CMR document

Suggested changes

We recommend that warehouse companies formalise and publish on their website their expectations towards the metal owners. To do so, they could publish a process that – in particular – describes the information and documents required from the metal owners at the different stages of the load-out process. Warehouse companies could potentially refer to these obligations in case of dispute.

4.5. Logistics rate structure

Issues raised

Two main issues were raised in relation to logistics rates (note their absolute level is not in the scope of the Logistics Review):

- Types of charges differing across warehouse companies and delivery points
- Low transparency on the level of charges (i.e. the metal owner might only discover the full charges after having bought the metal)

An additional element of complexity is that there is no standard definition of the charges across the industry (e.g. different definitions of FoT).

Findings

Although the rent and FoT are supposed to be the reference charges for the LME, in practice there are other charges on top of this and transparency on charges for metals owners could be improved.

Two approaches have been identified to introduce greater clarity into the logistics charging structure:

- First, warehouse companies could publish all of their rates, to increase transparency for metal owners
- Second, a consistent structure for logistics rates could be defined to facilitate more direct comparability between warehouses and a more transparent market

Suggested changes

Warehouse owners could look to increase transparency around rates as a best practice (noting the LME may not be able to mandate this). In addition to the charges (rent and FoT) submitted to the LME currently, additional rates could be published on the warehouse companies' websites including the following:

- FoR (Free on rail): loading of metal at the rail spur on a closed railcar and haulage as appropriate
- FaS (Free alongside) for break-bulk: loading of metal and delivery alongside the vessel on the quay side

- FCY (Free in container yard) for containers: stuffing, strapping, and lashing of a container, and delivery at the container yard
- Re-warranting
- Slot rescheduling at the request of the metal owner

Note that the responsibility for the metal is transferred from the warehouse company to the transport company after it has been delivered according to the FoT, FoR, FaS or FCY definition.

The payment and levels of charges would obviously remain a matter between the warehouse company and the metal owners.

5. Approval process

This section deals with the main aspects of the approval process for new delivery points, warehouse companies or sheds:

- Approval process workflow
- Roles of the LME committees
- Documents required for a delivery point application
- Potential external due diligence for a delivery point application

5.1. Approval process workflows

Issues raised

Several issues have been raised with the current approval process for good delivery points:

- The process is not clearly formalised
- The process could benefit from improved transparency
- The role of the committees could be clarified

Findings

A revised approval process should help create a fair and transparent process while providing flexibility for the LME to maintain an efficient network:

- The application process needs to maintain a certain degree of formality and be consistent and fair for all market participants
- Due to local peculiarities, the process should leave room for individual assessment, so not every detail of requirements for applicants can be formalized in advance
- With their industry knowledge, the LME committees can be leveraged on specific topics in the application process, while the final decision should remain with the LME
- Different types of investigation need to be carried out by the LME: technical assessment based on the criteria mentioned in the Policy and Guidelines for Good Delivery Points and strategic assessment based on fit with the LME strategy

The approval process can be split into different steps, where a specific type of investigation will be carried out at each step. In addition to structuring the process, these steps would allow the LME to report to the warehousing committee the status of the various types of applications.

In particular, for a good delivery point application, the LME could report the identity of the applicant, to allow warehouse companies to start assessing potential operations in this delivery point.

Suggested changes

We suggest implementing a four-stage gated process for the approval of good delivery points, with the following activities to be carried out:

Gate 1: Application reception and check of basic criteria by the LME

- Check if the required documents and the application contents have all been submitted
- The fit of the applicant to the strategic development of the LME network is assessed (e.g. geographical focus, metal focus)
- Check of basic criteria listed in the policy and guidelines for applications, approval to proceed to assessment stage

Gate 2: Technical assessment by the LME

- Technical assessment of application
- External due diligence by 3rd party approved by the LME at the cost of the applicant (e.g. assessment of the legal and tax environments) as required

Gate 3: LME committee input

- Input of the relevant committees to the application is requested
- The committee input is acknowledged as expert input and is not binding on the ultimate decision to approve or deny the application

Gate 4: Final assessment by the LME

- It is possible for the LME to refuse applications at this stage, provided that the LME acts fairly, reasonably and proportionately in doing so

Throughout this process, the LME will report to the warehousing committee on the application status of good delivery points that have passed each gate.

5.2. Involvement of committees

Issues raised

LME committees play an advisory role when deciding about new delivery points. The main issue which arises from this is that committees have deep but relatively narrow insight, focused on production/consumption of metal (relevant metal committee) and on warehousing/logistics topics (warehousing committee).

Findings

Two types of committees seem to have a significantly relevant input to provide about a new delivery point:

- Warehousing committee about the logistics topics (infrastructure availabilities, connections, etc.)
- Metal committee(s) about the production/consumption in a given area

Suggested changes

We suggest formalising the role of the committees in the revised approval process, where their input is gathered and analysed in Gate 3. The input is acknowledged as expert input and is not binding on the ultimate decision to approve or deny the application. The two expected types of input would be:

- Areas of net consumption for the relevant metal committees
- Logistics connectivity and infrastructure for the warehousing committee

5.3. Required documents for good delivery point applications

Issues raised

There is no clear list of documents which the LME needs in order to process applications. That creates a lack of clarity on the applicant side and – in some cases – may lead to a lack of relevant information for the LME when reviewing applications (applicants might justify not providing certain information on the ground that this information is not explicitly included in the list of requirements).

Findings

It would be helpful to provide greater clarification of the documents required for the approval process. This would:

- Facilitate the collection of basic and useful data
- Facilitate the collection of homogenous information
- Promote a consistent approach, and equality in the treatment of applications
- Reduce time and effort for the Physical Operations team

Suggested changes

For the aspects reviewed, we believe at least the following information and documents should be required for an applicant to pass through Gate 1:

- Statistical evidence of throughput tonnages of metals by means of contact with the metals trade, forwarding agents, fabricators, producers, warehouse companies, traders, etc.
 - Statistics on production and consumption of metal as well as imports and exports for the relevant area
 - Major points of production and consumption and associated volumes in the relevant area
 - Trade flows serviced (i.e. O/Ds served) with associated services
- Logistics connections
 - Maritime: number of short and deep sea connections, number of shipping lines calling at the port, frequency of services
 - Rail: frequency of service and time to access major consumption points
 - If applicable, barge: frequency of services and time to access major consumption points
- Detail/data of the logistics support services of the delivery point
 - Container terminals, break-bulk terminals (including crane infrastructure)
 - Number, length and depth of berths (including draft for accessing the berth – e.g. river draft)
 - Number and capacity of rail terminals
- Approximate percentage utilisation of services of road/rail/water (as applicable) for both inbound and outbound traffic in the relevant metals
- Logistics infrastructure
 - Estimation of number of available sheds that warehousing companies can use for LME storage operations
 - Detailed maps/plans showing the outline of the area and location, evidencing logistics connections and locations of short/long term warehouse facilities
 - Where relevant, a description of the applicant's existing operations and services in the delivery point including, for example, terminal operations, warehouse ownership, logistics operations etc. together with a detailed assessment of how its operation of an LME warehouse in addition, might be expected to affect market conditions, including the possible negative and positive effects on competition

- Work labour practices
 - Working/overtime hours of the employees operating the terminals, customs clearance and logistics operations within the port areas
 - Labour costs
 - Average time to load a truck, a railcar, a container, or a break-bulk shipment

This list can be refined by the LME based on its prior experience with applications. In addition, the LME should retain the right to ask for specific documents due to local specificities for the delivery points/company to be reviewed, or for any other reason, acting reasonably.

5.4. Required external due diligence for good delivery point applications

Issues raised

Some of the analysis required to correctly assess the relevancy of a good delivery point application is very technical, and neither the applicant nor the LME may have the required technical expertise. As a result, third-party assessment may be required to verify specific points, such as tax and legal issues.

At the moment, the principle and the expected content of these due diligence steps are not formalised in the Policy and Guidelines for Good Delivery Points.

Findings

Based on the LME's experience, a description of which issues would likely require third-party assessment could be developed in advance. Such due diligence should become part of the normal review process, except in some cases (e.g. application from a delivery point in a country where the LME already has a good delivery point).

Suggested change

We suggest formalising this in the Policy and Guidelines for Good Delivery Points by including certain due diligence steps, which shall be taken at the expense of the applicant, and where necessary should be conducted by third party specialists that are considered suitable by the LME.

The key information to be collected through the external diligences would be set by the LME and could include for example:

- Metal ownership: that warrants can be the document of ownership and metal still belongs to the owner in the case of warehouse bankruptcy
- Companies: that warehouses may be owned by foreign companies, operations in foreign currency are allowed and there is no undue delay of payments

- Taxes: that the tax and duty free environment is suitable for LME business (across transactions, storage, ancillary services, stevedoring & handling goods, delivery point duties, time constraint of storage, seller/buyer obligation to have a tax registration, metal bound for export or moving between different warehouses/good delivery points having no tax liabilities)
- Other: that there is no conflict between LME requirements and insurance laws that preclude warehouse companies from obtaining the necessary coverage under the LME Warehouse Agreement, no requirement to keep lists of owners, no embargo other than UN against origin countries, no export license requirements, domestic and foreign goods can be stored in the same warehouse environment, or any other external diligences that the LME may reasonably require

6. Conclusion

Based on this logistics review, we suggest the following changes to the Policy and Guidelines for Good Delivery Points and LME Policy Regarding the Approval of Warehouses be considered and consulted upon. The potential changes have been incorporated into a mark-up of these documents that were passed to the LME.

For the avoidance of any doubt, please refer to the full description of the suggested changes in the main text.

Approval of good delivery point

- Definition of “area of net consumption”: clarification of the definition based on a consistent negative trade balance at the level of a sub-region in the case of large countries, country or aggregation of small countries with an integrated logistics surface network over a two-year period
- Logistically sound conduit: clarification of the definition with the following: the good delivery point should be on the natural route for the consumption centre and well connected to other regions of the world through deep-sea connections
- Berth draft: requirements should be increased from 8 metres to 11 metres for new delivery points
- Rail requirement for good delivery points: required in Germany, Belgium, Netherlands, Sweden and the United States; conduct a case-by-case analysis for an application for a delivery point in a new country
- Inland delivery points: clarification of requirements, including being positioned on a major land trade lane for the metal, connected to an export port in the region, having both rail and barge connections, and having a minimum combined capacity of 4,500t/day for barging and rail
- Having more than one warehouse company is the preferred option of the LME; a newly listed delivery point should allow more than one warehouse company to operate
- Good delivery point boundaries: could be re-assessed only in exceptional circumstances and where there is a major shortage of storage capacity. The existing good delivery point boundaries would be considered as the starting point, with small increments used to determine boundary expansion. The enquirer (e.g. warehouse company, port authority, etc.) would need to demonstrate the shortage of storage capacity before any review by the LME

Approval of warehouse companies

- For ocean port delivery points, rail spur no longer required at the shed level; but available (provided there is enough spare capacity) at the good delivery point level (provided that the LME has decided that rail is a requirement at this delivery point); warehouse companies are obligated to bring back metal to the spur (but loading the metal in the railcar would be an optional service)

- Warehouse companies listed for the first time need previous systems and metal storage experience among their key staff, and should be on probation for two years
- The LME would not approve warehouse providers that control the operation of any infrastructure or the provision of any service in the delivery point that is believed to be critical to other warehouse companies in the delivery point concerned, and where the LME has a genuine concern that the applicant's operation of an LME warehouse could be detrimental to competition

Operations

- Load-out definition: to count as a load-out, a load-out should be accompanied by a bill of lading (or equivalent for other transport modes)
- Slot scheduling: standard process to be published by the warehouse companies
- Load-out fees: to be paid up front at cancellation and to be no more than the warehouse operator's rate at the date of cancellation
- Additional minimum load-out requirement in case of implementation of the new LIFO rules: obligation for the warehouse company to move forward the whole queue
- Recommendation that warehouse companies publish on their website their main logistics fees: rent, Free on Truck (FoT), Free on Rail (FoR) for rail connected or non-connected sheds, Free alongside (FaS) and Free in Container Yard (FCY), and charges related to additional requests from metal owners

Approval process

- Approval process: Four stage, gated process: (1) reception and check for completeness of applications, (2) technical assessment based on Policy and Guidelines for Good Delivery Points and LME Policy Regarding the Approval of Warehouses criteria, (3) LME committee input (not binding on the LME), and (4) strategic assessment by the LME and final decision
- LME committee input focused on area of net consumption for metal committees and logistics infrastructure and connectivity for the warehousing committee. The input is acknowledged as expert input and is not binding on the ultimate decision to approve or deny the application
- Required documents for applying: set up of a list of minimum documents to be provided by applicants
- The LME can request external due diligence (e.g. on legal and tax issues) if needed