

LIBHONGOLETHU FARE POLICY AND STRUCTURE (VERSION 2)



LIBHONGOLETHU

Moving the Metro forward



INTEGRATED PUBLIC TRANSPORT SYSTEM



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POLICY HISTORY PAGE

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LIST OF ABBREVIATIONS

Abbreviation	Description
ABT	Account Based Ticketing
AFC	Automated Fare Collection
DORA	Division of Revenue Act No. 1 of 2015
EMV	A global payment standard for credit and debit cards based on chip card (as opposed to magnetic stripe) technology. All EMV based smart cards are interoperable across EMV compliant systems.
IPTN	Integrated Public Transport System
MFMA	Municipal Finance Management Act No. 56 of 2003
MSA	The Local Government Municipal Systems Act 32 of 2000
NDOT	National Department of Transport
NMBM	Nelson Mandela Bay Metropolitan Municipality
NLTA	The National Land Transport Act 5 of 2009
NT	National Treasury
PTNG	Public Transport Network Grant

1. INTRODUCTION

Libhongolethu is the name given to the Integrated Public Transport Network (IPTN) in the Nelson Mandela Metropolitan Municipality (NMBM or the City). The ultimate system is envisaged as a network of public transport routes, operated by appropriate vehicles, bringing public transport solutions to as many users of public transport as is possible.

NMBM introduced phase 1A of the Libhongolethu system during the 2017/2018 Municipal financial year. It is envisaged that the Libhongolethu services will be expanded into the following service areas:

- Phase 1A – Cleary Park,
- Phase 1B – Kariega (Uitenhage) and,
- Phase 1C - Western Suburbs.
- Phase 1 D – Njoli, and
- Phase 1E – Motherwell

The decision to expand the services will be informed by a number of critical determinants. These include:

- The industry's ability and willingness to continue,
- the ultimate financial sustainability from the City's perspective,
- the level of funding provided by the project sponsors (being National Treasury and the National Department of Transport), and
- the community's response to the service.

One of the responsibilities of the City is to acquire and provide a method of collecting and controlling fares charged to passengers. All fares collected shall accrue directly to the NMBM.

This fare collection shall be undertaken by means of an automated fare collection (AFC) system, albeit that the system itself may be different for the initial phases of the starter service to that finally envisaged for the full operations.

This technical note considers the fare strategy, structure and policy that will be implemented for Libhongolethu.

The **fare strategy** sets the parameters which should be achieved by the successful introduction of the fare structure and the fare policy. The strategic considerations that should be met ultimately drive the direction that is adopted in respect of the structure and policy.

The **fare structure** looks at the basis under which the fare should be calculated. This is usually determined by an analysis of the different routes and the extent to which fares are similar (or dissimilar) on routes. The most common types of fare are the flat fare and the graduated fare. A flat fare is consistent throughout the service, whereas a graduated fare is determined by the distance travelled on a particular route.

The **fare policy** then determines the business rules as it applies to the fares. The fare policy typically talks to increases, concessions or discounts, effects of changes in underlying operational costs and related matters. A **fare** is defined as the amount or charge received in exchange for the transport services provided.

mini-bus taxi and bus operators (if at all), and any annual increases should continue to be reasonable and affordable for all income groups.

The affordability consideration also needs to take into account the ultimate operational cost of the AFC system, as excessive management and administrative costs cannot be passed on to commuters.

From the management and administration perspective the fare system should require limited reliance on subsidisation or grant funding. There should also be minimal costs associated with oversight administration and fare collection.

2.2.2. Travel behaviour patterns

The historical spatial development patterns of South Africa and the NMBM are such that many commuters travel great distances to and from work. Public transport is therefore often designed to deliver maximum efficiency at a particular time in the day, mostly referred to as the peak period. During the off-peak periods, many vehicles are idle, spending their time parked at depots or holding areas, waiting in anticipation of the next peak.

In some cases, a fare policy can positively influence both the times of, as well as the duration of, the peak periods. Peak spreading is a transport management technique, which should also be encouraged, but an example of fares being used to influence the travel behaviour patterns would be to introduce discounts to commuters who travel in the off-peak periods.

2.2.3. Integration

Integration (or integrated) refers to the ability to promote continuous movement of commuters between the various modes within the system. This includes, but is not limited to, provision of an AFC system which can be used on different vehicles or modes or routes within the overall package of public transport interventions.

2.2.4. Attractive to users

The ultimate success of a transport initiative is often measured not only by the migration of existing public transport users to the system, but also by the adoption of the service by current users of private transport. The system should promote a convenient and effective service that attracts existing public transport users and provide a ready alternative to private transport users. Fares should be geared to encourage migration, and discounts for frequent use should be promoted.

2.2.5. Accessible

In order to be effective, any public transport system needs to be accessible to the targeted users. From the perspective of fares, accessibility refers to those elements of the AFC that will ensure that the users are able to access the fare medium as and when required.

2.2.6. Flexible and adaptable

Flexibility and adaptability refer to the ability of the fare strategy, structure and policy to cater for concessions, exemptions and incentives during various time periods (e.g. peak vs. off-peak) and to different segments (e.g. scholars and pensioners) of the commuters whilst also reasonably safeguarding excessive loss of revenue as a result thereof. The fare strategy should also accommodate the phased implementation of Libhongolethu and have the ability to change should circumstances relating to future implementations change.

2.2.7. Sustainable

This is the ability of the fare strategy, structure and policy to generate the highest possible amount of revenue for the NMBM. The fare revenue is required to cover, to the greatest extent possible, the direct operating costs of the system, which are the vehicle operating costs of fuel, labour, operator administration and vehicle maintenance.

Any shortfall in coverage will have to be made up from other sources of revenue, in the absence of which the NMBM will have to make up the shortfall from own resources. In any city of this nature, own resources are already being stretched to the greatest extent possible, and additional call on these resources from within Libhongolethu may raise doubts as to the future sustainability of the system.

2.2.8. User friendly

The fare system must be understood by, and can quantify the journey costs for, commuters. The journey costs should be capable of quantification upfront, and it should be a robust system that avoids and prevents overcharging and allocation of incorrect fares.

2.3. Legislative considerations

Any fare strategy must comply with all necessary legislation and regulations from a National, Provincial and Municipal perspective. As regards the establishment and implementation of this fare strategy the applicable provisions in terms of the legislation are outlined below.

2.3.1. The National Land Transport Act 5 of 2009 (NLTA)

The NMBM is responsible in terms of section 11(1)(c)(xxiii) of the NLTA for “in the case of gross cost contract for subsidised services, determining fare structures and fare levels and periodically adjusting fares after publishing the proposed adjustments for public comment.” In addition, in terms of section 11(1) (c) (xxiv) “determining concessionary fares for special categories of passengers in the prescribed manner.”

2.3.2. The Local Government Municipal Systems Act 32 of 2000 (MSA)

In terms of section 25 (1) of the Municipal Systems Act “Each municipal council must, within a prescribed period after the start of its elected term, adopt a single, inclusive and strategic plan for the development of the municipality”. Sections (1) (a) to (e) outline the conditions which must be met with regard to developing the Development Plan for the City or Municipality.

The provision of the bus services by Libhongoletu form part of municipal services as outlined in terms of section 73 of the MSA. The tariff policy regarding municipal services is outlined in section 74, which states in section 74(1) that “A municipal council must adopt and implement a tariff policy on the levying of fees for municipal services provided by the municipality itself or by way of service delivery agreements, and which complies with the provisions of this Act and with any other applicable legislation”.

The conditions of the tariff policy are set out in section 74(2) of the MSA, which include that users should be treated equitably in application of the tariffs. The amounts paid should generally be in proportion to their use of that service. It also allows for subsidisation of tariffs for poor households through direct or indirect methods. In terms of sections 74(2)(e) the NMBM must ensure that “tariffs must be set at levels that facilitate the financial sustainability of the service, taking into account subsidisation from sources other than the service concerned”. It is stated in section 74(3) that “A tariff policy may differentiate between different categories of users [based

on] geographical areas and other matters as long as the differentiation does not amount to unfair discrimination”.

2.3.3. Municipal Finance Management Act No. 56 of 2003 (MFMA)

The revenue generated from the collection of the allocated fares for services relating to Libhongoletu will be governed by the Municipal Finance Management Act (MFMA) which governs all fiscal and financial matters pertaining to municipalities. In terms of section 2 of the MFMA, “The object of this Act is to secure sound and sustainable management of the fiscal and financial affairs of municipalities and municipal entities by establishing norms and standards and other requirements for (a) ensuring transparency, accountability and appropriate lines of responsibility in the fiscal and financial affairs of municipalities and municipal entities; (b) the management of their revenues, expenditures, assets and liabilities and the handling of their financial dealings; (c) budgetary and financial planning processes and the co-ordination of those processes with the processes of organs of state in other spheres of government; (d) borrowing; (e) the handling of financial problems in municipalities; (f) supply chain management”.

The reporting and handling of these revenues is partially outlined in section 17 (1) which states that “An annual budget of a municipality must be a schedule in the prescribed format—(c) setting out indicative revenue per revenue source and projected expenditure by vote for the two financial years following the budget year.”

In terms of the adjustments of tariffs of services the MFMA states in section 28(6) that “...tariffs may not be increased during a financial year except when required in terms of a financial recovery plan.”

The provisions of the MFMA are relevant to the extent that they indicate a requirement to include any fares that may be applicable to the IPTS in the tariff setting process for the municipal financial year in which Libhongoletu is likely to be introduced.

2.3.4. Division of Revenue Act No. 1 of 2015 (DORA) and other infrastructure related grants

DORA provides for the division of nationally raised revenue among the national, provincial and local spheres of government. The Act works in conjunction with the MFMA and Public Finance Management Act and is interpreted in relation to these pieces of legislation. DORA governs both the distribution of equitable share and grants as well as directing the conditions under which those allocations are made.

In relation to Libhongoletu the allocation of funds from government towards the project will be determined in terms of the provisions of DORA, and in particular within the conditions and guidelines as imposed for the Public Transport Network Grant (PTNG).

Within the conditions relating to the network operations component¹ of the PTNG, it is specifically stated that “from the start of operations, IPTN systems must recover all the direct operating costs of contracted vehicle operators from fare revenue, other local funding sources and, if applicable, from any Public Transport Operations Grant contributions. These direct operating costs consist of fuel, labour, operator administration and vehicle maintenance.”

This is particularly important as it is indicating that the City should attempt to keep the fare box as high as possible, the direct operating costs as it relates to the operation of the buses themselves as low as possible, because any shortfall (or loss) from an operational perspective must be met by the City from other funding sources. This is especially relevant if we consider that no operating city in South Africa is at this time fully recovering their direct operating costs from the fare box.

2.4. In conclusion

Legislation and strategic considerations noted, the fare strategy needs to ultimately attempt to create an acceptable balance between affordability and the longer-term sustainability of the system as a whole. Sustainability does not mean that the fare box should cover the direct operating costs, but it does indicate that the NMBM must be aware of the requirement for any shortfall to be covered by any other system revenue, together with any other City contributions.

Any City contributions must be sustainable throughout the expected tenure of any operating system.

¹ At a general level, the Network Operations Component refers to those funds which can be expended to support the operational aspects of the public transport system. The Network Infrastructure Component may be expended in respect of the capital or infrastructure components of the system.

3. THE ANTICIPATED FARE STRUCTURE

3.1. The fare structures

From a theoretical perspective, there are essentially three possible fare structures that need to be identified and interpreted. These fare structures are the flat fare, the zonal fare, and the distance-based fare.

- The flat fare approach means that there is one fare charged across a particular route, irrespective of the origin and/or destination of the commuter within that particular route.
- For the zonal fare approach, the area covered by the public transport system is divided into zones, and fares are charged depending on the number of zones traversed from origin to final destination.
- In a distance-based fare calculation system, the charge is based on the actual distance travelled, normally based on a predetermined initial boarding fee added to a fare per kilometre travelled.

In addition to the above, two other fare structures are theoretically possible within a transit system.

- The free fare structure, which is applicable in an environment where the provision of public transport is a government obligation and where the government takes the decision to fully subsidise the costs associated with public transport. This approach may also be applicable in an environment where the cost of collecting a fare is more than the actual fare that can be charged.
- The time-based approach, where the commuter is charged based on the time taken to complete the journey. This approach is generally used in combination with any other method and takes the value of time into consideration. An example of a time-based fee in the way in which a traditional London taxi charges, where the fee is a combination of distance travelled and standing time in the heavy traffic of London.

These latter two structures are generally not considered feasible within the South African public transport environments.

3.2. Evaluation of fare structures

From the NMBM context, a fare structure which meets the key strategic considerations at the least probable future operational cost should be selected at this time. Figure 3-1 below shows the evaluation matrix which assists to derive the most appropriate solution. This figure uses a robot (or traffic light) system to show relativity across the strategic considerations. The evaluation does not delve into the weighting that should be applied to

different strategic considerations, as such weighting may be different for different implementation stages of Libhongolethu.

A green result indicates that the best relative result will be achieved by utilisation of a particular fare structure. An orange result shows that an acceptable result can be achieved, but this will require some additional work or cost (relative to the other systems being evaluated against that particular strategic consideration. A red result shows that an acceptable result may be achieved, but that additional work or cost will need to be incurred. In principle thus, each of the fare structures may meet the required strategic considerations, but at a different level of output, additional work and cost.

Fare structures linked to strategic considerations

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Strategic Considerations	Flat Fare	Zonal Based Fare	Distance Based Fare
Affordability to user	Green	Green	Green
Affordability of AFC system	Green	Yellow	Red
Effect of travel behaviour	Yellow	Green	Green
Integrated	Yellow	Yellow	Green
User attractiveness	Green	Yellow	Red
Accessibility	Green	Green	Green
Flexible / Adaptable	Red	Green	Green
Sustainability	Yellow	Yellow	Yellow
User friendly	Green	Yellow	Red

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Figure 3-1: Fare structures linked to strategic considerations

Referring to Figure 3-1 above, the following is noted:

- For an **affordability to the user** perspective, an affordable fare can be produced for any of the fare structures, as the key driver in this regard is not the fare system, but rather the ability of the passenger to pay for the transport provided.

- When we however consider the **affordability of the underlying infrastructure and technology requirements**, the flat fare can be operated at a lower cost than the distance-based fare, with the key (relatively expensive) requirement for the distance-based fare being the requirement for the system to determine the exact origin and destination for each passenger and apply a different fare calculation to each passenger.

The above noted, it is also relevant that the AFC systems required for the distance or zonal based fare systems do however also provide more useful data as regards travel patterns and use of particular routes, which data may in time be utilised to refine the operational system. The AFC system related to the flat fare may not provide this level of detail.

- **Travel behaviour patterns** are not directly linked to the fare structure but are influenced rather by the policy that is introduced. The required technology to support the flat fare system might not always have the functionality to provide different fare structures. This in turn means that additional cost may have to be incurred to provide different rates to different categories of commuter.
- If the City adopts a flat fare, from the commuter perspective this is easier to **integrate** with other providers of public transport, as those providers tend to use a flat fare approach on individual routes. From a technology perspective however, the distance-based fare system will allow for easier fare integration across an entire network. This is as a result of increased functionality providing the ability to recognise more easily the transfer from one mode to another. On final analysis, the distance-based fare system would allow for more equitable integration across an entire transport system.
- Fare structures themselves will not enhance or detract from the travel experience, but from an ease of use (and hence **attractiveness to user** perspective), the fixed fare system is the easiest to understand, with the distance-based fare system being the most complicated – and often the fare system with the greatest level of confusion as to the actual fare that will be charged. In addition, the evaluation is expressing the fact that the more expensive system in a restricted funding environment will potentially draw available funding from other areas which could reduce the overall attractiveness of the system to users.
- Notwithstanding the chosen fare system, both the fare medium and fare calculation and collection methodology must be accessible to all potential users of public transport. No distinction is thus drawn between **accessibility** from the perspective of the fare system.
- The system needs to be **flexible and able to adapt** to future changes. The flat fare system would generally have less optionality built into the technology when compared to the zonal and distance-based solutions.

- One of the few certainties in life is change. Apart from fuel and salary charges (two of the significant direct operating costs), other operating costs will change over time. The technology underpinning the zonal and distance-based fares will be more able to account for increases as they become necessary from an ongoing sustainability perspective, however it will never be feasible for increases beyond those introduced during the normal tariff setting process of the City. In principle thus, **sustainability** must be considered during the fare structure selection process, and importantly, as all fare systems are significant expenditure items, sustainability must be assured no matter which structure is selected.
- User friendliness is often quoted by users of public transport as one of the most important requirements after affordability. Especially in an environment where you may not be familiar with the local geography, knowing exactly what you are going to pay is often critical to ensure the long-term viability of the system. The most user-friendly system is undoubtedly the flat fare system, whereas the most difficult is that where the fare changes on an incremental basis, and the underlying calculation may not be clear at all times. This is the case for a distance-based fare. The zonal fare may be relatively uncomplicated where there are limited zones, but it too is more unfriendly than a flat fare.

In summary, the evaluation of fare structures shows that the **flat fare** structure is easy to use and implement, and the price of a journey will be clearly understood by passengers. The fare structure generally favours commuters with longer travel distances (or commuters using the vehicle from first origin to final destination on any particular route), whilst adversely affecting those with shorter travel distances. It is also emphasised that the decision as to whether to walk or use public transport in the case of a flat fare is significantly swayed in favour of the walk.

For the **zonal fare** structure, once explained, the passenger is able to determine their fare quite easily. The price for a longer journey will be more than the price for a shorter journey, which is more equitable from a total passenger population perspective. Short journeys within a single zone will however suffer the same outcome as the walk decision for the flat fare.

The **distance-based fare** structure can be more complicated from the perspective of passenger fare understanding, but it does provide the greatest flexibility in respect of changes that may be required in the future. All fares are based purely on actual distance travelled, with short journey trips potentially becoming

more feasible. The biggest downside is the cost of the underlying technology, which is significantly more than for the flat and zonal fare structures.

The above noted, affordability to the user is of paramount importance, and this can be achieved irrespective of the structure. Sustainability of the overall system also needs to be seriously considered before any final and irreversible decision is taken. By way of example, it would not be sensible to implement a system wide flat fare solution and then find as more routes are introduced, with potentially longer travel distances, that a system wide flat fare structure and the resultant under-recovery of direct operational costs associated therewith leads to Libhongolethu becoming financially unsustainable.

In principle, introduction of a flat fare system will be significantly less expensive than that required for both the zonal and the distance-based systems. This is because the latter systems require information on both the origin and destination of a trip, in order to calculate the applicable fare. A flat fare system only requires either the origin or the destination, linked to a particular route, and not both the origin and destination of each passenger.

3.3. Fare structure recommendation

Based on the analysis presented above, the recommendation for a fare structure is that a route based flat fare system is introduced. The flat fare for each particular route in the system will be based mainly on the affordability consideration and thus take into account the current fares being charged by the current public transport operators.

The above noted, this decision can be reassessed for each significant stage of implementation, and where a potential loss in fare revenue associated with flat fare implementation is recognised, consideration should be given to the possible introduction of an abbreviated zonal based system, which system would allow for different (but equitable) charging of fares based on affordability and distance travelled.

4. FARE POLICY

4.1. Introduction

Libhongoletu is competing against the current mini-bus taxi and bus markets. The fare would have to be much the same as the current fares charged by these operators. A slight increase could however be applied as we are in principle offering more (from a passenger experience perspective) than a current mini-bus taxi or bus.

An important assumption is that the loss of any short trips (or partial trips) will not have a significant effect of the ultimate level of fares received. Should this be found not to be the case, then the flat fare system needs to be revisited.

4.2. Concessions

Many public transport systems offer a range of discounts or concessionary fares to target groups. Examples of such groups may include learners, students and pensioners. Other groups may include military or police personnel, unemployed people, indigent people, and people living with disabilities.

Concession discussions often become discussions regarding the required political outcomes, but bearing in mind that the sustainability of public transport is already being questioned, and that public transport is already heavily subsidised, it is suggested that concessions should only be considered in the following cases:

- Where people are unable (as distinct from unwilling) to pay for the service associated with public transport.
- Current practise in competitive public transport operators needs to be replicated.
- Where there is a desire to encourage different travel patterns.
- Where concessions can be implemented and managed in a cost-effective manner.

For concessions to be monitored and to limit the incidences of fraud, all concessions would have to be made available via a system of personalised card (or distinct and different paper ticket), which does already have an additional cost associated therewith.

While the cost associated with the introduction of concessions cannot be calculated at this time, staying within the above parameters the following concessions/discounts should be considered:

- Learners / scholars in uniform receive a reduced fare.

- Students in possession of a valid NMBM issued student travel card. An interim system and methodology to issue these NMBM student travel cards is to be investigated. With the introduction of the smartcards, it will be a requirement that students will need to register their smartcards as students to receive this concession. Each student travel card shall expire annually, requiring re-application.
- Pensioners receive a reduced fare when in possession of a valid Pensioner Identity card. With the introduction of the smartcards, it will be a requirement that pensioners will need to register their smartcards as pensioners to receive this concession.
- A maximum of two (2) children under the age of four (4) years and not requiring a seat and travelling with a fare paying adult may be transported free of charge.
- Police, in service with the SAPS and NMBM Metro Police and in uniform may travel free of charge. This concession is granted on the understanding that such police will assist any person within the IPTS system if any crime or incident occurs.
- In time, consideration may be taken for the discounting of all off-peak usage, but the initial recommendation would be to gather commuter information for several months following the implementation of the first phase, before such a decision is taken.

4.3. Cash, paper ticket and smartcard

The payment method used in NMBM for current mini-bus taxi public transport users is essentially cash. Cash collection by transaction, whether on a bus or at a station, results not only in a delay in respect of the amount of time taken to board the bus, but also carries the associated risk which arises whenever large amounts of cash are accumulated in a place which is not necessarily designed to be a cash holding facility (i.e. a bus or mini-bus taxi). A bus driver should essentially drive a bus and not be a cashier as well.

National Treasury (NT) and the National Department of Transport (DoT) are insisting upon the use of Account Based Ticketing (ABT) compliant, inter-operable payment solutions. Account Based Ticketing (ABT) is a Pay-As-You-Go fare collection system using secure fare media as the identifier linked to a prepaid account in a back-office system. In the case of the NDOT ABT system this is facilitated and implemented by using SANRAL's Mobility Account as the basis for interoperable fare collection functionality.

The SANRAL Transaction Clearing House (TCH) back office will host the ABT accounts, known as Mobility Accounts. Commuters are required to deposit funds into Mobility Accounts held at the SANRAL TCH to prepay expected usage of public transport services. The Mobility Account stores relevant information related to the balance of value available and that can be accessed by the ABT fare media which is the unique identifier linked to the Mobility Account.

Europay, Mastercard and Visa (EMV) may be introduced later as required. EMV means that payment is transacted using a pin and chip card, which card holds the information (an amount of cash in an electronic purse and/or a recognisable product) on the card itself. The card and products are purchased and/or reloaded at authorised vendors.

Europay, Mastercard and Visa (EMV) is a global standard which recognises compatible debit and credit card payment cards, point of sale payment terminals and transaction processing networks based on chip card technology. EMV uses cards which are known as smart cards that contain embedded microprocessors that provide strong transaction security features and other applicable capabilities that are not possible with the traditional magnetic strip cards. These cards operate without contact, meaning that they do not need to be swiped to register the contents stored on the card, but rather that the details or transaction are registered by coming into close proximity with an acceptable reader.

eThekweni's "Muvo" cards and Cape Town's "myConnect" are examples of currently utilised EMV compliant contactless smart card technology being actively used as payment media in public transport in SA.

EMV also improves the security of payment transactions due to various levels of technical functionality, including card authentication method that are designed to protect the system against counterfeit cards.

Within the context of Libhongoletu, commuters or users should be able to buy the smartcards from a wide range of locations. These can be specific vendors, current retailers, banks or any other environment where the handing of cash is part of their current activities. This would encourage take-up of the service. Early engagement to ensure the support of potential retailers is essential to secure their buy in to the system.

Keeping in mind that the current proposal is for the implementation of a flat fare system travel cards would need to be validated upon entry to a vehicle or station. Based on the proposal for a flat fare structure, travel cards would need to be validated on boarding a bus or entering a station.

Other considerations linked to the utilisation of a smart card may include the following (some of which are separately discussed below in more detail):

- An audible or visual sign should be given to indicate whether any transaction has been successful.
- An additional warning may be provided if funds or products are running low as a way to prompt users to top up the mobility account, cash purse or product aspect of the card.
- Penalties must be charged for fare avoidance.
- Conductors (employed by the VOC) and Inspectors (employed by the NMBM) will be used to ensure general compliance with the appropriate fare regime. It would not be necessary for all buses to carry inspectors, but rather inspectors should be deployed on buses where theoretical fare calculations are proving to be different to the actual collections.
- Consideration may have to be given to electronic verification of passenger volumes. Turnstiles in buses are used elsewhere in the world but are extremely problematic for people living with disabilities or people using baby pushchairs etc. Verification by electronic means (e.g. counters at the doors) have been shown to be effective for passenger number verification and subsequent reconciliation.
- The adaption of a product as a method of fare collection rather than cash is recommended for the long-term sustainability and ease of use taking into account all the considerations outlined above. Due recognition should however be given to the cost of both implementation and ongoing operation and maintenance. Only the essential features should be activated for the first implementation stage.
- The introduction of the ABT / EMV smartcard system, supported by the AFC system, will result in additional costs in respect of:
 - The card itself, and
 - So called top-up fees, TCH charges or bank charges which are charged by the commercial bank that manages the ABT/EMV solution.

A decision as to who shall bare the above costs must be taken in due course, but whatever the outcome, the commuter should see an all-inclusive fee being charged, including any applicable bank charges. The cost of the

initial card should be seen as marketing expense, in order to encourage migration to Libhongolethu without an additional charge for the commuter.

Finally, the full implementation of an ABT/EMV compliant smartcard fare system is still in the process of being procured. Consideration has therefore been given to an interim paper-based system. A paper-based solution should be seen as a temporary solution only, albeit that it can be retained as a viable single trip solution for the future.

A single trip solution is one aimed at infrequent users (e.g. tourists) who may not have a desire or requirement to purchase any more than a few single trips at any particular point in time.

4.4. Use of travel products

Within the context of the smartcard, provision is normally available for both an electronic cash holder (the purse) and a second area of payment referred to as the product.

To allow for discounts or concessions, a product area on the EMV smart card is required.

Consideration may be given in due course to discounted fares relating to the upfront acquisition of several trips, whether weekly or monthly or for whatever period the market requires.

The MyCiTi system in Cape Town sells a point-based product system, which if purchased upfront allow discounts of up to 30% in respect of the particular trip on which the points are utilised. The reason this is effective is because the loading of cash on a EMV compliant smart card incurs a loading fee, but the loading fee does not apply to the loading of a product.

Implementation of a “pay-as-you-go” system with frequent user discount will also be investigated in the context of the final AFC system and should this prove capable of being implemented should take preference (within the EMV environment) over the introduction of specific weekly or monthly products.

The AFC System shall make provision for implementation of Travel Products based on the following requirements:

- The Travel Product shall be implemented in the NMBM operator specific product frame on the Fare Media in order to ensure that the Travel Product can only be used on the NMBM IPTS and not on any other service.
- The Travel Product shall allow a pre-defined amount of travel or number of trips.
- The Travel Product shall have an optional expiry date.
- The AFC system shall implement a mechanism whereby a specific Travel Product can only be issued on card purchase or registration.
- The AFC system shall implement a mechanism whereby a specific Travel Product can be limited by commuter against an ID number.

4.5. Annual fare increases

Provision must be made for an annual escalation of the fares charged. This increase should be set, as a minimum, at the level of the transport related consumer price index (CPI).

As public transport fees have in some cases been allowed to fall below actual annual increases in transport related expenditure, provision should also be made to increase the annual fees by more than the transport CPI.

This will to a certain extent allow for the appraisal and inclusion of potential fuel increases during the following year, but in addition, will allow for the gradual increase in fares to reflect the fact that the provision of enhanced public transport requires a greater contribution from users of that public transport.

Bearing in mind the affordability criteria, it is also essential that the public transport population is increased to incorporate more private transport users, such that cross subsidisation can result in equitable payments based on gross affordability.

The schedule of fares (Annexure A) must be included in the municipality's Tariffs Booklet and increases shall be approved, by the council, annually at the same time as the rest of the tariffs and will be made public in the same manner.

4.6. Ad-hoc fare adjustments

Provision must be made to implement ad-hoc adjustments to the level of fares being charged, as and when necessary and subject to the conditions discussed in this Policy. This is to ensure that sufficient cost recovery is maintained in the event of, amongst others, substantial fuel price increases, operational reasons, under recovery and market related adjustments.

Such adjustments will be submitted to Council for approval prior to implementation.

4.7. First boarding and subsequent transfers

For the starter service, a flat fare basis is proposed.

To encourage migration and use of Libhongoletu it is however also proposed that a continuation trip, in other words a second or third leg within a designated time period would be allowed at a reduced fare.

Within the context of the AFC system, provision thus needs to be made to ensure that the system can cope with this scenario.

4.8. Single trips

As mentioned above, provision must be made for those commuters who are not regular travellers and would not normally be in possession of a smartcard (travel card). This would typically include visitors to NMBM.

The automated fare collection solution should allow for the issue of single trip tickets, whether via refundable smartcard, single-use smartcard, electronically on the bus, or via a paper ticket system.

To discourage regular use of something which is designed to be irregular, the fare for a single trip ticket should be priced higher than that of a regular user. The pricing should not be exorbitant, but none the less it must be different.

These tickets may also be used to accommodate special events for non-regular users of the system. An example of this might be international supporters being transported to and from a sports stadium, as part of their sports tour.

4.9. Penalties

In a flat fare (or non-distance) payment environment, the AFC system will not be required to actively calculate or impose penalties, as in principle, entry to the system will not be allowed without sufficient funds or product being loaded on the card.

Penalties for fare evasion can only be levied in terms of legislation, and without being definitive in this regard now, it is likely that Municipal By-Laws will have to be established to impose fare evasion penalties.

Whilst the NMBM must take primary responsibility to monitor and limit fare evasion, the VOC should also be contractually bound to enforce the collection of fares and the minimisation of evasion.

All drivers should be trained in the ability to monitor fare evasion but rely on enforcement by the on-board conductors (employed by the VOC), and/or the roving inspectors (employed by the NMBM).

4.10. Returns

Only tickets that are still valid, and in a suitable condition to be resold may be considered, subject to the policy statements below, for return or refund. The decision for return or refund shall remain with the Manager: Fare Systems, IPTS Unit. His/her decision is final, and no further correspondence will be entered into.

- 1) No ticket that has been used will be accepted for return/refund.
 - a) Any ticket that has been used for travel can be returned or refunded. Used tickets will have a ride cut off and will be machine stamped with the machine number, date and time, and route number.
- 2) No ticket that has been defaced or damaged in any manner will be accepted for return/refund.
 - a) Any ticket that has been defaced, written on, torn, folded, rolled, altered, cut, bent, crumpled or text/printing has been erased or altered in any way that it cannot be resold may not be accepted for return/refund.
- 3) No ticket that has had its security foil been removed or tampered with shall be accepted for return/refund.
 - a) Each ticket has been manufactured with a silver foil security seal to clearly display official tickets. Any ticket without this seal is either a counterfeit or has been tampered with and is not to be accepted for return/refund.
- 4) No copies, counterfeit, scanned, redrawn, or in any way, duplicated tickets will be accepted for return/refund.

- 5) No ticket will be accepted for return/refund at any of the NMBM's Customer Care Centres.
 - a) Only the Manager: Fare Collection Systems, IPTS Unit, or an official duly delegated, may authorise a ticket return/refund.
 - b) This is to provide a consistent approach to the evaluation of each instance where a ticket is submitted for return/refund.
 - c) Persons wishing to return or obtain a refund for tickets must apply in person at the advertised IPTS Offices.
- 6) No ticket that has expired, due to price increases or other reasons, beyond the grace period advertised will be accepted for return/refund;
- 7) Bulk ticket returns will only be considered in exceptional cases.
 - a) Persons or vendors may return bulk ticket stocks in the following circumstances:
 - i) When they do not wish to continue being a vendor and have bulk stock on hand;
 - ii) The bulk stock is still bound in the original manner and no tampering is evident;
 - iii) Bulk stock serial numbers are in sequence with no missing tickets.
 - iv) Bulk stock is not damaged or defaced in anyway;
 - v) A legible, original cash register printed receipt, indicating the ranges of serial numbers that were originally purchased, date of transaction, and location of the transaction, accompanies bulk stock.
The serial numbers returned must be consistent with the ranges indicated on the receipt.
 - vi) Refunds for bulk stock will be made to the purchased value, not the face value of the tickets.
- 8) All persons returning tickets must provide their full personal and contact details on the Ticket Returns Application Form provided, including:
 - a) Full Names;
 - b) ID Number;
 - c) Full Residential Address;
 - d) Day time contact telephone number; and
 - e) Reason for requesting refund.



4.11. Other matters for consideration

- The hours of operation will be a function of passenger requirements, implemented using an operational plan, such plan being limited by the available fleet of vehicles and available funding. The optimal hours of operation will be determined by that operational plan which delivers the highest possible recovery of direct costs.
- All equipment purchased to support the AFC must be upgradable to the highest extent possible to accommodate requirements in the future that are not anticipated at this time, subject always to an assessment of the cost involved in providing functionality that may or may not be used in the future.
- The requirement for open or closed stations should be assessed in due course.
- The distinction between double (entry and exit) versus single (entry only) validation will only be relevant once the final decision as to the most appropriate AFC system is taken.

As stated earlier in this document, the fare strategy needs to take into consideration all factors that are considered to be relevant from the perspective of both the provider and the user of public transport. The strategic considerations that were considered as a requirement within the fare strategy are recorded below, together with a description of the way in which the current proposed fare will attempt to meet the considerations.

- *Affordable to the passenger and affordability of the AFC system.*
 - Whilst public transport is a significant share of the income of many of the potential passengers, and affordability in the context of relatively low-income earners shall always be an issue, the proposed fare does not materially increase the cost of current public transport alternatives. This is especially relevant if we consider that the current mini-bus taxi fare across the affected area is between R 8.50 and R 13.00 per trip. The average fare charged by Libhongolethu will be R 10.00 in current money terms.
 - In addition, the fare structure proposed will not materially increase the operating cost of the required automated fare system and hence will not negatively affect operational costs.
- *Designed to change travel behaviour patterns to suit operational requirements.*
 - The currently proposed fare structure does not in itself look to affect travel behaviour patterns.
- *Integrated to the extent possible with other providers of public transport.*
 - The proposed ultimate fare methodology can be integrated in due course.

- *Attractive from a relative perspective.*
 - The level of fares, coupled with the anticipated level of service, should be attractive to a current public transport user. This should also assist to migrate some current non-public transport users to Libhongolethu.
- *Accessible*
 - The use of as broad a pool of vendors as possible will ensure that the fare system itself is accessible to commuters.
- *Flexible and adaptable.*
 - The flat fare by route which is proposed is flexible and adaptable, but consideration may have to be given to a different fare approach should a requirement for passenger usage within a particular route change in the future. This will be considered with starter service stage of operation.
- *Sustainable over the longer term.*
 - The overall sustainability of the system would be improved by an increased fare, but the requirement for affordability does not allow an increase at this time. Provision is however made for fare increases in line with transport inflation rates, and in particular in line with changes in the fuel price.

5. SCHEDULE OF FARES

Schedule A, appended to this policy, indicates the level of the fares and other criteria on which the fares will be calculated.

This schedule will be included in the municipality's Tariffs and will be revised, at least, annually to indicate the amendments to the fares being charged.

SHCHEDULE A: SCHEDULE OF FARES

The outline of the suggested actual fares for the starter service are summarised in Table 1 below.

TABLE 1: FARE LEVELS

Description	Notes	Output									
Recommended fare structure		Flat fare per route, based on the number of trips									
Fare medium	1	- Paper-based interim solution - Account Based Ticketing (ABT) compliant smartcard.									
Cost of fare medium (Smartcard)	2	- Initial batch to be paid for by the NMBM - Thereafter R XX.xx per card									
2024/2025 Adult fares for the Cleary Park area		- R 10.00 per trip on the trunk/main route/s - R 8.00 per trip on the local/feeder routes Booyens, Chatty, Kleinskool <table border="1"> <tr> <td>R8.00</td><td>Cleary Park</td><td></td></tr> <tr> <td>R18.00</td><td>R10.00</td><td>Lillian Diedericks</td></tr> </table>	R8.00	Cleary Park		R18.00	R10.00	Lillian Diedericks			
R8.00	Cleary Park										
R18.00	R10.00	Lillian Diedericks									
2024/2025 Adult fares for the Kariega Area		- R 10.00 Rosedale to Kariega CBD/Volkswagen (VW) - R 15.00 KwaNobuhle to Kariega CBD, including Volkswagen - R20.00 KwaNobuhle to Rosedale <table border="1"> <tr> <td>Rosedale</td><td></td><td></td></tr> <tr> <td>R10.00</td><td>Kariega CBD/VW</td><td></td></tr> <tr> <td>R20.00</td><td>R15.00</td><td>KwaNobuhle</td></tr> </table>	Rosedale			R10.00	Kariega CBD/VW		R20.00	R15.00	KwaNobuhle
Rosedale											
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TABLE 1: FARE LEVELS

Description	Notes	Output
Annual escalation	3	- Minimum of full transport-based CPI - Fares to be rounded to the nearest 50 cents - Provision to be made for a mid-year adjustment in the case of a revision of fuel prices.
		Schedule A and Table 2, below, to be included in the Municipality's Tariff Booklet and be approved annually, by Council, at the same time as the other municipal tariffs.
Frequent user discount	4	15% discount
Single ticket premium	5	None for starter service
Concessions	6	- Maximum of 2 children under the age of 4 years not requiring their own seat and accompanied by a fare paying adult may travel for free. - Learners in uniform – 20%. - Students in possession of an NMBM issued Travel Card – 20% - Pensioners over 65 and in possession of a valid pensioner ID card – 20%
Public holidays, Saturdays and Sundays	7	No discount
Penalty for non-payment of fare	8	Flat penalty of R 50.00

Notes	
1	The cost of the single ticket solution will only be determinable following evaluation of responses to the AFC tender. The cost relative to the expected usage should determine the viability of the requirement.
2	The cost of the card will be finally determined following evaluation of the responses to the AFC tender.
2.1	In November 2018, Council approved an amendment to the fares to be charged on the feeder routes to realign the fares similar to what the minibus-taxi industry are charging for similar trips.
3	In terms of the MFMA, only an annual revision is allowed, however an interim adjustment is allowed in circumstances where a reference cost changes. It is proposed that the fuel price would act as an acceptable reference point for mid-year changes in the fares.
4	This level of discount would have to be determined based on an analysis of the cash (versus product) loading fee which will be applicable. This can only be done following evaluation of the responses to the AFC tender.
5	This premium should equate (if possible) to the additional cost of providing this solution.
6	The exact percentages that will be applied should be based on an affordability decision, alternatively what is currently offered by the viable competition.
7	This discount will only be applicable if an incentive is required to promote usage of the system on these days.
8	This penalty is designed to discourage fare evasion and has been recommended at approximately 5 times the value of a single trip.

TABLE 2: TICKET PRICES

Route	Ticket Type	Code	Trips	Price (2024 – 2025)
Local / Feeder Routes	Single Transfer	A	1	R8.00
	Multi Journey Transfer	B	2	R16.00
	Multi Journey Transfer	C	12	R96.00
	Single Transfer (Concession)	D	1	R6.50
	Multi Journey Transfer (Concession)	E	2	R13.00
	Multi Journey Transfer (Concession)	F	12	R78.00
Trunk / Main Routes	Single Main	G	1	R10.00
	Multi Journey Main	H	2	R20.00
	Multi Journey Main	I	12	R120.00
	Single Main (Concession)	J	1	R8.00
	Multi Journey Main (Concession)	K	2	R16.00
	Multi Journey Main (Concession)	L	12	R96.00
Trunk / Main Routes Kariega/Rosedale/ Kwanobuhle	Multi Journey Main – Rosedale-CBD	M	2	R20.00
	Multi Journey Main – CBD - Kwanobuhle	N	2	R30.00
	Multi Journey Main – Rosedale - Kwanobuhle	O	2	R40.00
	Multi Journey Main (Concession) RosedaleCBD	P	2	R16.00
	Multi Journey Main (Concession) CBD - Kwanobuhle	Q	2	R24.00
	Multi Journey Main (Concession) Rosedale - Kwanobuhle	R	2	R32.00