INTRODUCTION

Kampala Capital City Authority (KCCA), as the local highway authority, requires that development addresses any adverse impacts of traffic generation (such as road safety and congestion), widens travel choices by maximising non-car access (such as walking, cycling and public transport), and accommodates the needs of people with disabilities.

Traffic impacts (and how to mitigate them) are an important consideration for any community when a significant development is proposed. Public policy makers, citizens and developers all have a stake in understanding and responding to additional demands on the transportation system. All share the common interest of a well-functioning transport network. A properly developed traffic impact study can provide the factual basis for good decision making and facilitate the timely implementation of necessary improvements.

A traffic impact analysis is a study which assesses the effects that a particular development will have on the transportation network in the community. The analysis considers all transport modes, how development impacts upon them, and how the infrastructure or services could be improved, by the developer, to address the impact of the development.

Depending upon the scale and nature of the development proposal, applicants might be required to undertake a comprehensive traffic analysis known as a **TRANSPORT ASSESSMENT** (TA) while others might require a less detailed analysis known as a **TRANSPORT STATEMENT** (TS).

WHEN IS A TRANSPORT ASSESSMENT NECESSARY?

Planning applications for the following developments **MUST** be accompanied by a Transport Assessment.

- All proposed developments within the Central Business District **(APPENDIX C)**
- All developments with accesses on the following classes of roads: KU, KA, and KB **(see Appendix D)**.
- All schools
- All parking facilities
- All supermarkets and shopping malls,
- All hospitals
- All stadia
- All cinemas and conference facilities
- All other commercial land uses (buildings, spaces etc.) of Gross Floor Area equal or greater than 1,000m^2.

For other types of developments not listed above, a Transport Assessment should be undertaken whenever a development is expected to generate 50 or more new trips (arrivals plus departures, by all travel modes) during the peak hours. Even if the development does not generate the threshold level of trips, a Transport Assessment may still be necessary under the following conditions, for instance:

- High traffic volumes on surrounding roads that may affect movement to and from the proposed development.
- A development that includes a drive-through operation

Guidance on the expected contents and structure of a Transport Assessment is provided in **APPENDIX A.**

WHEN IS A TRANSPORT STATEMENT NECESSARY?

A comprehensive traffic impact study is not necessary for every development. Other developments might require a Transport Statement.

> *A Transport Statement (TS) is a simplified transport/traffic impact assessment which is used in cases where transport issues arising out of development proposals may not require a full Transport Assessment.*

The following developments **MUST** be accompanied by a Transport Statement:

- All fuel stations
- All garages
- All washing bays

A Transport Statement may also be necessary where the development does not qualify for a TA but where KCCA has concerns, for instance, regarding:

- Proposed access locations (e.g. direct access on to a congested or high speed road, proximity of the proposed access points to other existing drives or intersections etc.).
- Inadequate sight distance at access points

Guidance on the expected contents and structure of a Transport Statement is provided in **APPENDIX B.**

If a developer is not sure if their proposal requires a Transport Assessment/ Transport Statement or none of the two, please contact the Manager of Transport Planning, at KCCA for further guidance/ clarification.

APPENDIX A - TRANSPORT ASSESSMENT (TA) CONTENT AND STRUCTURE REQUIREMENTS

Early discussions with KCCA on the extent and nature (The Scope) of the TA/TS is recommended to ensure that work is not undertaken unnecessarily and that resources are directed to the areas needing attention.

In order to establish a mutually agreed scope of work for the traffic study the developer and/or their consulting engineer shall meet with KCCA's Transport Planning/Traffic Engineering staff. A tentative schedule for reviewing and processing the traffic impact study will be developed. The initial meeting shall include a discussion of the key issues including access location, boundaries of the study area and scope of the TA. In order that this meeting is productive, consultants should, prior to the meeting, provide KCCA Transport Planning staff with background information (eg location, a plan showing site access(es), development details and lay out) to allow for initial research to be carried out.

A second meeting between the developer's consulting engineer and Transport Planning/Traffic Engineering staff shall be required so that technical aspects of the traffic study may be discussed prior to the final analysis. Subjects for review and pre-approval will include but not limited to:

- Trip generation, distribution and assignment assumptions.
- Intersections and roadway segments where capacity analysis will be required.
- Traffic growth factors/ rates.
- Junctions for capacity assessment.
- Inclusion of a Transportation Demand Management Plan (TDM) to mitigate unacceptable traffic impacts
- Any specific issues that require special consideration such as access, parking and special traffic controls.

All correspondence/ minutes of scoping meetings should be provided as a TA appendix, to facilitate the TA review process as the KCCA official involved at the scoping stage might not necessarily be the reviewer.

The content and level of analysis necessary to evaluate a project will vary and is dependent on the scope of land use proposal and location within the city.

All traffic studies will be organised and contain as a minimum, the information provided in the following outline.

I. BACKGROUND:

- Site location (a clear site location plan is expected), site boundaries, and brief description of existing land uses.
- Summary of development proposals
- Description of study area.

II. POLICY CONTEXT:

- Undertake a review of relevant transport policies and context.

III. DEVELOPMENT PROPOSALS:

- Describe type and scale of proposals and the lay out of the proposed site. Site Plan shall provide footways along the frontage of the plot.
- Describe access proposals for all travel modes. The following should also be provided:
    - A plan showing the proposed exact locations of all accesses.
    - Designs of all access junctions connecting to the KCCA road network should be provided, indicating clearly all the junction geometry, sight lines, proposed road markings, pedestrian facilities (e.g. footways and crossing facilities) etc. The accesses should be designed to appropriate standards[1].
    - Swept path analysis of the access junctions and internal vehicular circulation.
- Describe car and cycle parking proposals. The following should also be provided:
    - A plan showing the parking layout designed to appropriate standards should be provided.
    - Parking supply analysis indicating adequacy of the proposed parking.
- Describe any HGV servicing proposals including loading dock locations, HGV access, including design trucks used.

IV. EXISTING TRANSPORT CONDITIONS:

- Existing travel characteristics for journeys in this area (e.g. travel modes by purpose)
- Existing local facilities
- Review existing pedestrian and cycle routes, and pedestrian/cyclist movements

[1] The consultant is advised to refer to MoWT Road Design Manual and where this is found inadequate, to refer to relevant UK standards i.e. Manual for Streets (I and II) and Design Manual for Roads and Bridges (DMRB).

in the site vicinity
- Review existing public transport services and infrastructure
- Describe the existing local highway network and determine existing traffic volumes on the local highway network by undertaking traffic surveys at relevant links and junctions). Provide AM and PM peak hour traffic flow diagrams for existing traffic at junctions and connecting links.
- Assess road traffic accident record (for the latest three years) for the local highway network in the site vicinity.

V. FUTURE TRANSPORT CONDITIONS:

- Definition of future assessment year. This will be the year of opening of the proposed development or 5 years from planning application, whichever comes last.
- Identification of other development in the vicinity whose impact is to be taken into account in the current impact assessment. These include:
    - near-by committed[2] developments (traffic from these should be included in calculations).
    - planned future transport projects, that could affect or be affected by the proposed development.

- Forecast assessment year traffic (without the development). It is advised that traffic growth rates be agreed with KCCA at the scoping stage.

VI. TRIP GENERATION:

- Trip generation rates used and the source of these rates. It is advised that these rates be agreed with KCCA at the scoping stage.
- Traffic generated during peak impact hours.

VII. TRAVEL MODE SHARE:

- Trips by travel mode and assumptions made for mode split.

VIII. TRIP DISTRIBUTION:

- Method used to distribute traffic
- Table/ flow diagram showing estimated traffic movements by direction
- Discussion of method used for traffic assignment and assumptions for assignment of traffic to network

[2] Committed Developments are those developments that already have planning permission but have not yet opened. The consultant/ developer can agree with KCCA, which committed development to consider.

IX. TRAFFIC ASSIGNMENT:

- Assignment of peak-period traffic to intersections and access points
- AM and PM peak hour traffic flow diagrams for the following scenarios: assessment year without the development, development traffic only, and total traffic (i.e. assessment year with development).

X. TRANSPORT IMPACTS:

- The transport impacts of the development on baseline transport infrastructure and services will be assessed and impact mitigation measures to be provided by the development will be proposed in the TA. The assessments will include:
    - Junction modelling[3] (junction capacity assessments) for the key junctions agreed with KCCA at the scoping stage. Capacity assessments will be for the following 3 scenarios: Current year, Assessment year without the development, and Assessment year with development. The modelled/ calculated Ratio of Flow to Capacity (RFC) for priority junctions or Degrees of Saturation (DoS) for signalised junctions should be presented and interpreted, as well as the queues and delay. A report generated by the modelling software, indicating all model input and output, should be provided in an TA appendix and KCCA may ask for the actual modelling files if necessary, to facilitate the TA review process.
    - A quantitative and qualitative assessment of the development's impact on existing public transport facilities.
    - A quantitative and qualitative assessment of the development's impact on existing facilities for non-motorised traffic.

XI. IMPACT MITIGATION

- Measures will be proposed in the TA, to mitigate the development's transport impacts. KCCA will expect the developer to implement the measures proposed in the TA prior to development opening. These could be:
    - Physical improvements to junctions to improve capacity (they will have to be modelled to illustrate their effectiveness);
    - Physical improvements or provision of public transport facilities to encourage access to the development by public transport;
    - Physical improvements or provision of facilities for non-motorised traffic to mitigate development impacts, to enable convenient and safe movement

[3] The recommended modelling software is Picady for major/minor priority junctions, Arcady for priority roundabouts and LinSig for signalised junctions. Capacity assessments based on First Principles approaches will also be accepted upon illustration of method used and justification of assumptions made, to KCCA's satisfaction.

of the development's non-motorised traffic and to encourage the use of non-motorised travel modes.

- Measures to enhance road safety for all users, where there is an existing safety issue that might be exacerbated by the development proposals or where the development itself could be the cause of a safety concern.
- Soft measures to encourage access to the development by non-motorised means.
- Measures to manage travel demand.

XII. RECOMMENDATIONS AND CONCLUSIONS OF THE STUDY:

- Summary of study findings and proposed mitigation measures

APPENDIX B - TRANSPORT STATEMENT CONTENT AND FORMAT REQUIREMENTS

The Transport Statement shall cover the following:

I. EXISTING CONDITIONS:

Existing Site Information

- Site location (a clear site location plan is expected), site boundaries, and brief description of existing land uses.
- Description of study area.

Existing Transport Conditions

- A qualitative description of the travel characteristics of the existing site, including pedestrian and cyclist movements and facilities, where applicable.
- Describe the existing local highway network.
- An analysis of road traffic accident records (for the latest three years) for the local highway network in the site vicinity and proposal of measures to be provided by developer, to enhance safety.

II. DEVELOPMENT PROPOSALS

- Describe type and scale of proposals and the lay out of the proposed site. Site Plan shall provide footways along the frontage of the plot.
- A qualitative description of the expected travel characteristics of the proposed development.
- Describe access proposals for all travel modes. The following should also be provided:
    - A plan showing the proposed exact locations of all accesses.
    - Designs of all access junctions connecting to the KCCA road networks should be provided, indicating clearly all the junction geometry, sight lines, proposed road markings, pedestrian facilities (e.g. footways and crossing facilities) etc. The accesses should be designed to appropriate standards[4].
    - Swept path analysis of the access junctions and internal vehicular circulation.
- Describe proposed car and cycle parking arrangements.
- Describe any HGV servicing proposals including loading dock locations, and HGV access, including design trucks used.

[4] The consultant is advised to refer to MoWT Road Design Manual and where this is found inadequate, to refer to relevant UK standards i.e. Manual for Streets (I and II) and Design Manual for Roads and Bridges (DMRB).

III. RECOMMENDATIONS AND CONCLUSIONS

- Summary of study findings and proposed mitigation measures or transport improvements if any.

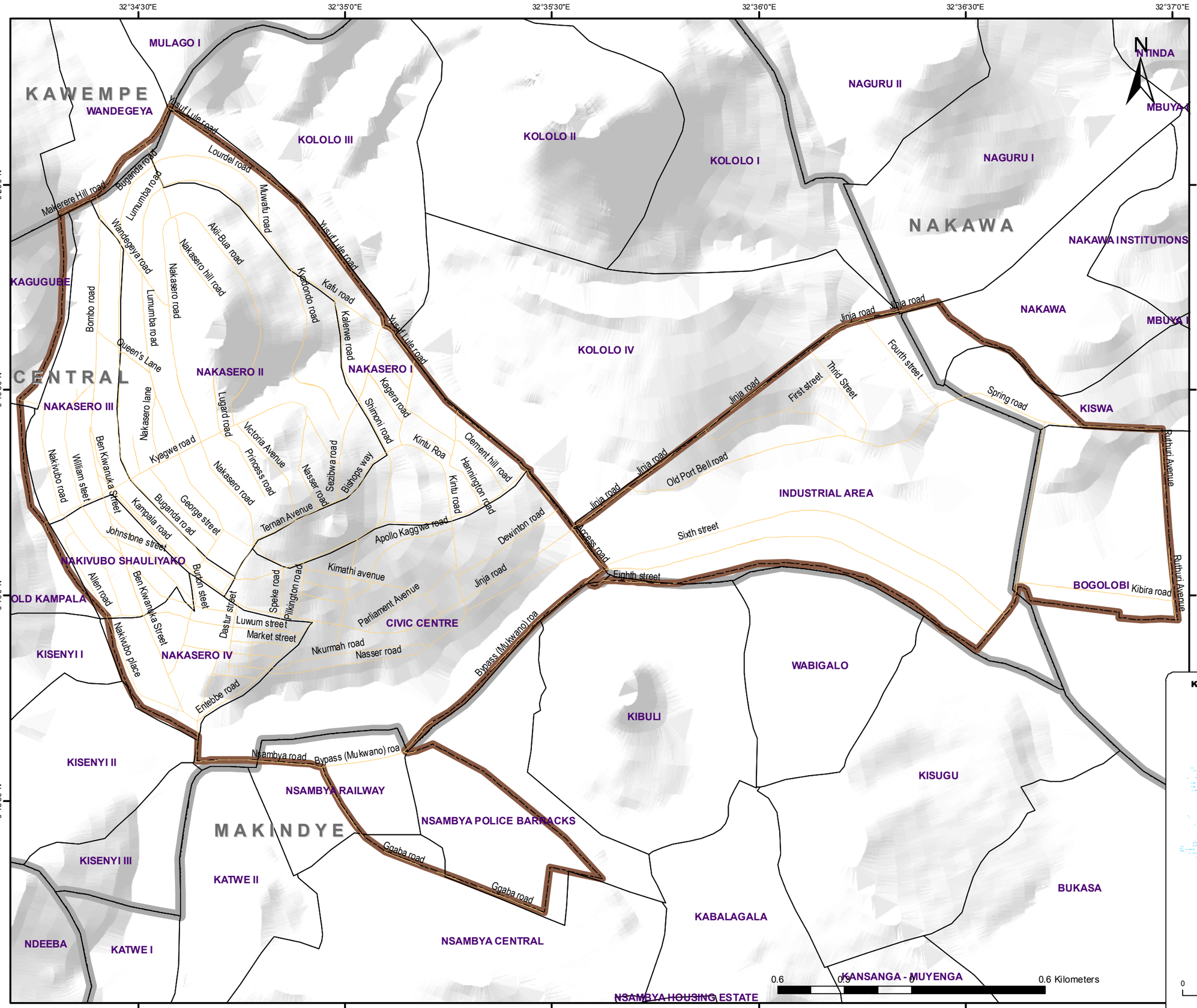
The above requirements are not exhaustive and there may be a need for supplementary information that takes account of local conditions as well as other material considerations. It is therefore important that the scope of the TS is agreed at the pre-application discussion stage between the developer and KCCA Traffic Engineers.

APPENDIX C – KAMPALA CENTRAL BUSINESS DISTRICT (CBD)

APPENDIX D – KAMPALA ROAD MAP

KAMPALA CAPITAL CITY AUTHORITY

KAMPALA CENTRAL BUSINESS DISTRICT (CBD) EXTENT



Legend

- Parishes
- CBD
- Divisions

Data Source

Roads: KCCA 2014, JICA 2012

Admn Boundaries: KCCA 2013, UBOS 2013

Coordinate System

Coordinate System: Arc 1960 UTM Zone 36N

Projection: Transverse Mercator

Datum: Arc 1960

False Eastings: 500,000.0

False Northing:0.0