**PROJECT OVERVIEW**

The Housing Development Workflow Management System (HDWMS) is a system developed to assist Developers to manage large housing development projects. It has been successfully used to manage the Vulindlela Housing Project in the Msunduzi Municipality which is one of the largest low-cost housing projects in South Africa comprising 25,000 houses. The system key features are:

- Search for a ward by selecting from a list of ward numbers.
- Find sites either visually on the GIS map or by keying in the house ID.
- Produce a map (to scale/scaled to fit) using A3/A4 in either portrait or landscape layout and export to PDF, AI, SVG, TIFF, JPEG, PS or PNG formats.
- Runs on standard web browsers e.g. Microsoft Internet Explorer so no additional software is required.
- Comprehensive reporting of various stages of the housing development listing totals by ward and status.
- Symbology to indicate both the site status as well as the beneficiary approval status.
- One central SQL Server database that integrates seamlessly with Microsoft SharePoint, K2 Blackpearl and ESRI ArcGIS Server technology. Stable back-end on best of breed technology means a reliable user interface for decision makers and production staff alike.

The construction tasks are tracked in the workflow. This ensures that the Construction Managers and Engineers are informed timeously on the progress being made on each and any tasks that they are required to attend to during the construction of each house. It also will allow project managers to track the progress and to be notified should any of the site start falling behind schedule.

Housing Development Workflow Management System consists of three primary interfaces: a SharePoint view, a K2 Blackpearl view and a GIS view. The Vulindlela Housing Project System is also a Geographical Information Systems (GIS) web based system that allows users to track the status of housing sites and generate reports that show detailed information per site as well as summary reports per ward.

The system allows users to view and interact with the GIS map of the housing development area, turn map layers on and off, locate a specific site and view attribute information attached to that site.

Users interact with the GIS map by using the function tool buttons found on the top of the map. The tool buttons include navigational tools such as the zoom in, zoom out, pan and zoom to full extent of the development. It also includes other tools such as identity and measure.

The “Find By Ward” tool button allows users to select from a predefined list of wards and then zooms the map to the extent of the chosen ward. The “Find By Sheet No.” tool button allows users to select from a predefined list of 1:2000 map-book sheets and then zooms the map to the extent of the chosen sheet.

The “Find By House ID” tool button allows users to key-in a house ID (which is comprised of the ward number and house number). If the entered house ID is found then the map is zoomed and centred on the found house ID.

The house/site status, i.e. the progress of the site through the housing development process is indicated by the various different shaped symbols. The status of the beneficiary allocated to the site is indicated by the various different colours.

The Hyperlink tool button provides a pop-up window displaying all of the attribute information that is associated with a site.

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