

KERTAS KERJA 11

- Tajuk** : Towards Collaborative Resolution In The Requisition Of
Survey For Land Under Acquisition Using Geospatial
Technology
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Pengarah Ukur dan Pemetaan Kelantan



Towards Collaborative Resolution In The Requisition Of Survey For Land Under Acquisition Using Geospatial Technology

by;

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Abstract:

Land acquisition for road, drainage for irrigation and low-cost housing scheme for public purposes has taken place since decades in the government agenda for state and national development. The survey of the partial land acquired and the remaining land lots after acquisition is inevitable to the land owners whom will be eventually honored a new land final title. Primarily, the land acquired will be gazetted under the Land Acquisition Act 1960 and specified in the Form K for the intention of compensation payment. The Form K prepared with the acquisition plan is crucial for the surveying to be carried out. A reliable source acknowledges that in the state of Kelantan some 8000 lots of land have not been surveyed under the Land Acquisition Act 486 (1960), largely are the land under drainage and irrigation purpose. *Kemubu Agricultural Development Authority (KADA)* is the agency that dealt with drainage and irrigation scheme. Land offices have found the difficulties in preparing the plans for the submission of requisition for survey. This was due to lack of appropriate acquisition plans, staff shortages, unavailability of skilled human resources and less priority given. KADA and land offices have established the importance of the issue be resolved. The resolution would rule out the setback and uneasiness of developing the remaining lots, problem of land subdivision and amalgamation process, hindered production of separate final titles, as well as the unfair and inaccurate distribution of seedlings and fertilizers to farmers. A meeting discussing the issue was held between JUPEM, KADA and the relevant land offices. In due course, an agreement was achieved to confront the problem of creating acquisition plan for the requisition of survey. The cooperation and integration force decided to assist JUPEM in utilizing the current geospatial technology to come out with sound output of the acquisition plans. The work and cooperation carried out has evidently expedited the preparation of requisition for survey (RS) plans so that the land offices would tender the RS documentation promptly. RS plan was produced digitally using GIS software with the overlaying of satellite imagery and Google Earth application. The resulted layers were superimposed with the New National Cadastre Database (NDCDCB) for the



delineation of the acquired part of the land and the remaining lands. Ground verification and appropriate spatial references were carried out minimally.

Through this project a spirit of 'Blue Ocean Strategy' has been acknowledged to be formed where collaboration between agencies, the decreased speediness of the procedure, cost reduction, the improved value of the process and new achievable opportunity are clearly perceived and revealed. These are obviously demonstrated by firstly; the creation of new additional work for JUPEM Kelantan, secondly; the saving in seedlings and fertilizers distribution, thirdly; the new value in the procedure using current technology, fourthly; the establishment of innovative capacity building, fifthly; a new dimension for KADA to redevelop and urbanized the land resources rightly, and finally; another resolution towards the speedy conversion of qualified title to final title.



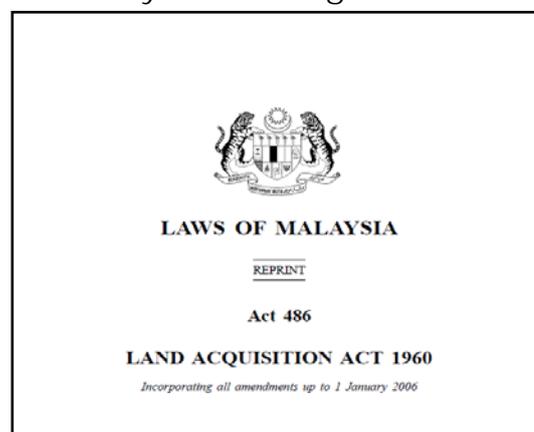
1.0 Introduction

The focus of this research project is to design an improved procedure using current GIS technology to respond to some difficulties in the land administration specifically in the process of land acquisition by the government to redevelop and utilize resourcefully the state and federal lands for the sake of the public. In this paper, the write-up will introduce: background, motivations, problems definition, research objectives, methodology, evaluation and discussion, as well as a concluding remark.

Subtopic 2.0 discusses the scenario and status of some lands that have not been surveyed finally and the shortfall of the process to deliver the surveying of the remaining land under land acquisition while subtopic 2.0 briefly defines the issues existed and thus come up with the research objectives. The next section reveals the methodology used in the project. The evaluation and discussion subtopic is enlightened subsequently, before concluding statement ends the paper.

2.0 Background And Motivations

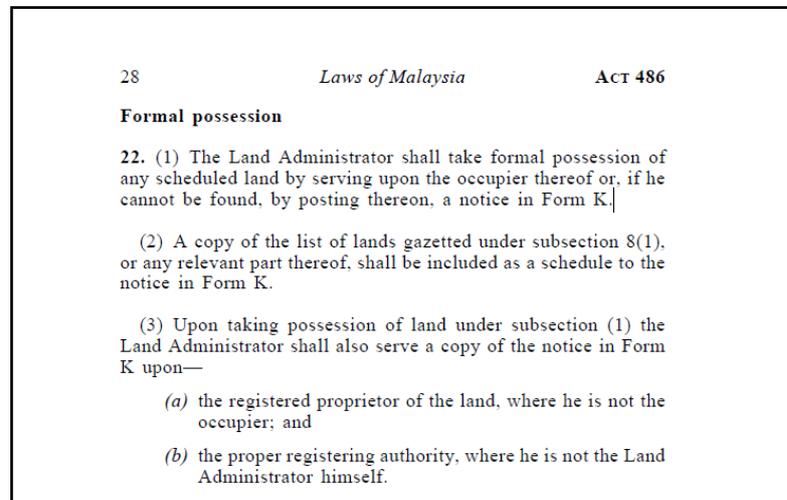
In the land administration of the state of Kelantan, there are a lot of development being carried out to meet with the demand for agricultural expansion and improvement, residential development and infrastructure building. These progresses have led to the need for extended land utilization and modernizing of the resourceful land. Having said that, acquisition of land under titles held by institutional setups, individuals, group of people and the state government is unavoidable. Predominantly, the land acquired will be gazetted under the Land Acquisition Act 1960 and tabulated in the Form K for the intention of compensation payment and requisition of survey of the alleged land.



The hindrance of the flow of work towards the land surveying of the acquired lands has been acknowledged and debated in the state government and in the people community. The administration in the land offices has been slackened by the



difficulty of producing documents such as plans that defined the acquired part of the land and Form K that tabulated the list of land under acquisition. It was claimed that these documents are not anymore available or lost in the early part of the acquisition process. The detailed documentations of Form K showing the acquired acreage and remaining area of the said land are extremely important in the progression as stated in the Land Acquisition Act 486 (1960) as shown below.



The unavailability or misplacement of the Form K and acquisition plans has hampered the proceeding of the survey of the acquired land. Land offices have perceived the compensation payment procedure has been final and the survey requisition be issued in the later stage. It was found that there have been some 10 years these lands have not been surveyed legally corresponding to the mentioned act. New titles and remaining areas of the land are required by the party or person involved. So, at this instance, the question of how can a land with no proposal plan of acquisition be carried out survey accordingly and be issued land title legally as structured in the list of Form K.

Geospatial technology is pacing tremendously. Land and surveying community are not to be divided in using the GIS, GPS and remote sensing technology. The usages of these technologies enable the success of solving social problem and land administration difficulties. It has been acknowledged that geospatial data are readily available in some agencies and has value if utilized intelligently. The contemporary trend and technology expertise available have motivated JUPEM Kelantan to the discovery of solution to the research problem.



3.0 Problem Definition And Research Objectives

Preceding acquisition plans are not obtainable in the land offices resulting in the deficiency of the procedure for requisition of surveying of the acquired land. Officers and staff in land offices establish the finding that nothing can be done to tackle the drawback. A research question can be posed here; how are these plans be drawn as the necessary document for the surveying to be carried out accordingly.

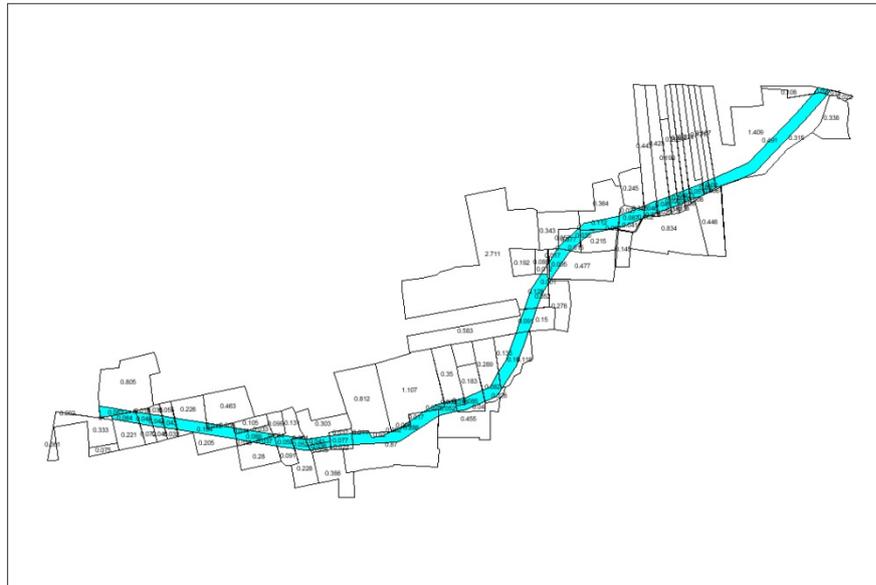
In order to confront the defined problem, the research objectives can be recognized in three statements as below;

1. To find ways to create and produce acquisition plans of the lands according to the initial proposed land acquisition.
2. To define the methodology using the current geospatial technology that can prove the possibility of enhancing the acquisition process.
3. To demonstrate the cost reduction, efficiency, value-added and new opportunity in the new procedure developed in this research.

4.0 Methodology Of The Project

The acquisition plan must be produced so that land office can submit requisition for survey of the acquired land. The methodology is confined to utilizing GIS layers that were constructed by the combining some field works, overlaying, satellite imagery visualization and Google Earth application, and digitization. The resulted and digita layers were superimposed with the New National Cadastre Database (NDCDCB) for the delineation of the acquired part of the land and the remaining lands. Ground verification and appropriate spatial references were carried out minimally. Consequently, GIS software likely MapInfo has enabled the execution of combined procedure to create hardcopy RS plan to be presented to the land offices for approval.

The case study was carried focusing in the area as shown below:



The preliminary RS plan created digitally for land office approval

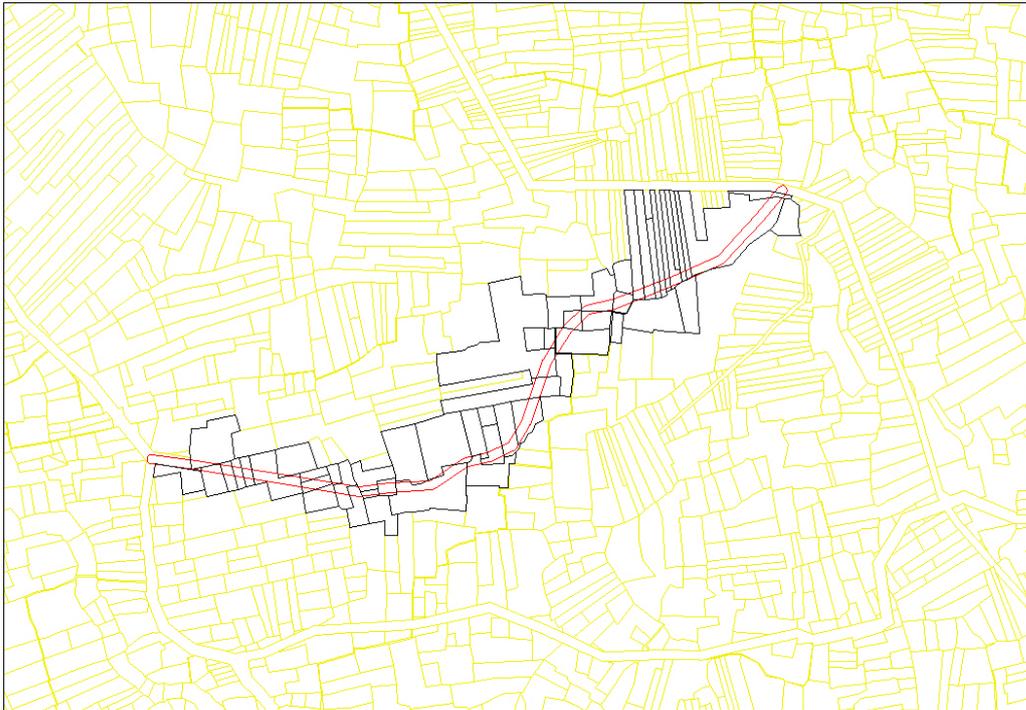


Satellite imagery overlaid with cadastral database

5.0 Evaluation And Discussion

Selected and acquired land lot has been populated using software and linked with the drainage scheme. Acquisition plan similar to the diagram or map as below was used as enclosure to the RS submitted by land office. As originally the drain were dug and constructed using contracted irrigation plan the remaining

areas of the lot involved will normally be truly accurate to the Form K list of acquired land.



The digitized drain is drawn digitally over the cadastral lots,
against the relevant acquired land lots

Using trendy and current technology it is proven that process and work in JUPEM and land offices can be expedited without wasting time, money and energy. No field work is generally executed maximally, only verification of boundary mark and boundaries where necessary. JUPEM has acquired using much costly tender job for the allocation of GIS software yet it has been used minimally in cadastral job. The delineation of boundaries such villages, gazette and local authority jurisdiction should compel to using the GIS capability of overlaying and digitization.

In the project, discussion and agreement within the three agencies has been achieved in a superb manner and a win-win situation has been demonstrated with high spirit of resolving the issues. Below letter shows example of the cooperation and accomplishment.



JABATAN UKUR DAN PEMETAAN
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Rujukan Kami : J.U.K.N 03.128 Jd.4/20
Rujukan Kami : 5 Ogos 2013
332924

Pengarah,
Jabatan Ketua Pengarah Tanah dan Galian (Persekutuan)
Negeri Kelantan,
Bandar Baru Tunjong,
Labuhraya Kota Bharu - Pasir Mas,
15100 Kota Bharu,
Kelantan.

Tuan,

PENYEDIAAN PELAN PERMOHONAN UKUR BAGI PENGAMBILAN BALIK TANAH

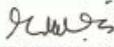
Adalah saya dengan hormatnya merujuk perkara diatas .

- Sukacita dimaklumkan bahawa Jabatan Ukur dan Pemetaan Kelantan telah beraya menyiapkan kerja ukuran pengambilan balik tanah bagi tujuan salinan dalam jajahan Pasir Mas, melalui fail PUKN 3180/2013 dan PUKN 3181/2013.
- Sehubungan dengan itu Jabatan mengucapkan terima kasih di atas kerjasama yang diberikan oleh pihak tuan.

Sekian terima kasih

" BERKHIDMAT UNTUK NEGARA "

Saya yang menurut perintah.


SR. DR. ZAINAL BIN A MAJIED
Pengarah Ukur dan Pemetaan
Kelantan.

(Silakan utorkan rujukan Jabatan ini apabila bertimbang)



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Rujukan Kami : JKPTG.KN. 220 / 2013 / 4 Jd 2
Tarikh : 17 April 2013

YBrs. Pengarah, UKUR DAN PEMETAAN Kelantan
Jabatan Ukur dan Pemetaan,
Jalan Hospital,
15000 Kota Bharu, Kelantan.

Tuan,

PENYEDIAAN PELAN PERMOHONAN UKUR BAGI PENGAMBILAN BALIK TANAH

Dengan sukacita saya merujuk kepada perkara di atas

- Sukacita saya memaklumkan bahawa Jabatan Ketua Pengarah Tanah Dan Galian Negeri Kelantan bersetuju dengan cadangan pihak Jabatan Ukur dan Pemetaan Kelantan untuk menjalankan uji coba menyediakan Pelan Permohonan Ukur bagi pengambilan balik tanah untuk simpanan saliran , jalan dan sebagainya.
- Untuk pengesahan pihak tuan terdapat banyak lot-lot yang terlibat dengan Projek Kelantan Utara (tahun 1978-1980) yang melibatkan dua jajahan iaitu Pasir Mas dan Tumpat belum dibuat ukuran pengambilan balik untuk mengeluarkan hakmilik sambungan melibatkan lebih kurang 3000 lot.
- Pihak Jabatan Ketua Pengarah Tanah Dan Galian Negeri Kelantan amat berbesar hati atas kesudian pihak tuan untuk menyelesaikan tunggakan kerja yang berlarutan lebih 30 tahun.
- Segala kerjasama dari pihak tuan diucapkan ribuan terima kasih.

"BERKHIDMAT UNTUK NEGARA"

Saya yang menurut perintah.


(CHE JOHAN BIN CHE SOH)
b.p. Pengarah
Jabatan Ketua Pengarah Tanah dan Galian(P)
Negeri Kelantan

(Silakan utorkan Rujukan Jabatan ini apabila bertimbang)



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Rujukan Kami: JKPTG.KN. 220/1002/1 JKPTG
Tarikh : 10 November 2013

YBrs. Pengarah Ukur Negeri Kelantan
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Tuan,

PENYEDIAAN PELAN PERMOHONAN UKUR BAGI PENGAMBILAN BALIK TANAH

Dengan sukacita saya merujuk kepada perkara di atas

2. Sukacita saya memaklumkan bahawa Jabatan Ketua Pengarah Tanah Dan Galian Negeri Kelantan mengucapkan **tahniah** dan **syabas** kepada Jabatan Ukur Dan Pemetaan Negeri Kelantan kerana telah berjaya menjalankan uji cuba dan inovasi tanpa perlu ke lapangan bagi menyediakan Pelan Permohonan Ukur pengambilan balik tanah.

3. Kejayaan pihak tuan telah berjaya menyelesaikan tunggakan dan diharapkan agar usaha-usaha sebegini dapat diteruskan dari masa ke semasa.

Segala kerjasama dari pihak tuan diucapkan ribuan terima kasih.

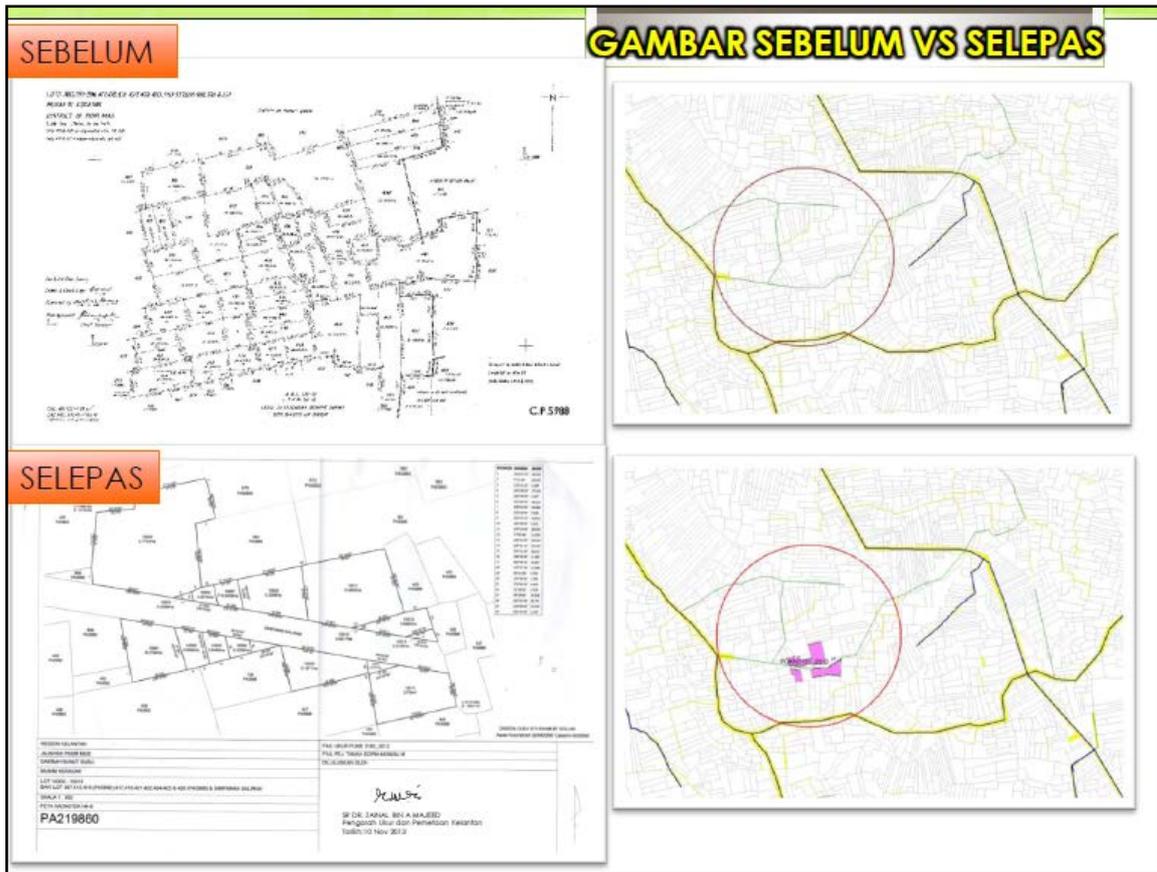
'BERKHIDMAT UNTUK NEGARA'

Saya yang menurut perintah.

(CHE JOHARI BIN CHE SOH)

b.p. Pengarah

Jabatan Ketua Pengarah Tanah dan Galian(P)
Negeri Kelantan



The diagram shows the approved PA has been signed for the project within the specified time for the preparation of land title.

Apart from the achievement of cooperation, value added to the process and speediness of the procedure, the cost of the execution of the work was also seen to lessen. Saving was reached as shown below.

Kes sebelum projek	kos
1. Penyediaan permohonan ukur i. Kerja pejabat 8 hari 8 hari x RM336.05 = RM2688.40	RM2688.40
ii. Kerja di lapangan 2 hari 2 hari x RM1638.05 = RM3276.10	RM3276.10
JUMLAH	RM5964.50
Kes selepas projek	kos
1. Penyediaan permohonan ukur i. Kerja pejabat 1 hari 1 hari x RM366.05 = RM366.05	RM366.05
ii. Kerja di lapangan 1 hari (jika perlu) 1 hari x RM1638.05 = RM1638.05	RM1638.05
JUMLAH	RM2004.10

6.0 CONCLUSION

The success of realizing a land acquisition survey while assisting the land offices and KADA in reducing their backlog has been achieved. The use of geospatial technology has defined the accomplishment of document plan that are accurately digitized to produce ground-true layout of the acquisition scheme. Through this project a spirit of 'Blue Ocean Strategy' (BOS) has been acknowledged to be formed where collaboration between agencies, the decreased speediness of the procedure, cost reduction, the improved value of the process and new achievable opportunity are clearly perceived and revealed. These are obviously demonstrated by firstly; the creation of new additional work for JUPEM Kelantan, secondly; the saving in seedlings and fertilizers distribution, thirdly; the new value in the procedure using current technology, fourthly; the establishment of innovative capacity building, fifthly; a new dimension for KADA to redevelop and urbanize the land resources rightly, and finally; another resolution towards the speedy conversion of qualified title to final title. In addition, after land has been surveyed legally, land owners and farmers not anymore paying the quit rent according to the bigger area of their land instead with much less price. A BOS project for the people that benefits all agencies has been succeeded.



Pelan Pre-PU yang diwujudkan untuk Pejabat Tanah mengemukakan PU