Protecting Coastal Reclamation Area in Johor, Malaysia Through the Provision of Planning Documents

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Abstract. In Malaysia, the extension of coastal land relieves the pressure of demands for housing, commercial and industries despite the issues concerning development projects, including the inconsistency of provisions in statutory and non-statutory planning documents, jurisdiction area of Local Planning Authority and the role of Planning Authority. This study aims at investigating the application of statutory and non-statutory planning documents for coastal land reclamation projects through a local plan and a Comprehensive Development Plan. It employs a case study method using the Forest City in Johor as the study area. Expert Interviews provided primary data whilst secondary data encompassed various development plans, legal documents and policies related to coastal reclamation and planning. Results revealed the lack of provision for coastal reclamation area development plans notwithstanding the important roles of the Planning Authority. The study, therefore, suggests a revision of legislation and a review of development plans for the reclamation area.

1. Introduction

This study has a special interest in coastal area development and looks closely at non-statutory (statute) and statutory documents (common law) that delineate the legislations and regulations of coastal development. The issue of the inconsistency of coastal development regulations is apparent through the non-statutory and statutory documents in Tanjung Kupang, Malaysia, which affects the process of land reclamation in Malaysia. It is therefore important to seek for practical approach to enhance the current practice of coastal development process.

Hence, this study aims at investigating the application of statutory and non-statutory planning documents for coastal land reclamation. It focuses on the existing Local Plan and Comprehensive Development Plan (CDP) applicable to the study area. The objectives were to examine whether the designated coastal zone is included in the provision by both statutory and non-statutory planning documents. Also, to investigate the extent of both documents’ relevancy for reclamation projects. Henceforth, the outcome of this study will enhance the awareness of authorities and stakeholders of the importance of a local plan and other development plans, to ensure the consistency of strategies for the development process. Therefore, any future local plan, which incorporates coastal zone as part of
development areas, would look carefully into the potential of creating new lands from reclamation activities.

A reclamation land is the artificial formation of new land by landfilling, leveling and draining at the coastal area [1]. The definition of a coastal area or coastal zone is a narrow area of land and wetland to the shoreline, where the sea and land meet [2]. Reclaiming and extending coastal land has been a method of reducing pressures from the increased population including economic pressure. Coastal reclamation activity has become an important approach in extending land for new development. Malaysia itself has seen demanding reclamation activities due to rapid development growth including the coastal zones. It is often believed that coastal reclamation development can provide additional land for economic activities like tourism, commercial and residential [1][3][4], even though Peninsular Malaysia itself has a stretch of 1,972km of coastline. However, despite the benefits of having extra land, it can also affect land jurisdiction and to some extent shape the development process of the area.

Reclaiming coastal zone is a phenomenon in many countries including Singapore, Japan, and Hong Kong. Coastal reclamation is a way of tackling the issues of land scarcity [5]. People believe that land reclamation can encourage the economic growth of a country but changes the physical appearance of an area and affects the environment, its natural habitat, and the ecosystem. For that reason, in Malaysia, an Environmental Impact Assessment (EIA) is required together with the application of development approval.

Historically, coastal reclamation goes back as far as the 1850s. Early reclamation activities were apparent in Hong Kong since 1841 [6]. The reclamation of coastal zone became a solution to accommodate the needs of population growth. In Malaysia, reclamation activities were recorded further back in the 18th Century in the State of Kedah, during the wet-rice cultivation. Later in the 19th Century, the Chinese immigrants carried out landfill reclamation in Batu Kawan Island, which eventually extended the original coastline. Back then, the execution of land reclamation was for agricultural purposes. [7] however recorded that reclamation activities started in the 1950s and came to the public interest in the 1990s. Nowadays, reclaiming coastal land is for mixed development consisting of residential, commercial and industries. Several states in Malaysia had undergone reclamation projects due to rapid development, which demands more land. In the States of Melaka, Johor and Pulau Pinang, coastal reclamation projects had provided new lands for residential and commercial activities. In Melaka, reclamation areas focused on new residential developments due to increased demands for quality urban housing. While in Penang, coastal reclamation activities are famous with its excellent waterfront and lifestyle consisting of residential, commercial and leisure developments. In 2017, there were more than 30 land reclamation projects approved, including natural and artificial coastlines [8]. However, land reclamation activities concentrate more in the State of Pulau Pinang [8].

2. Malaysian Statutory and Non-Statutory Documents for Reclamation Land

Previous studies revealed that there was inconsistency in the process of delivering development at coastal reclamation areas concerning the Local Plan (a type of statutory document). In Malaysia, a Local Plan is one of the Development Plans’ components. It is a document, which details out development policies addressed from a State Structure Plan (another type of statutory document). The strategies in a local plan include a delineation of the boundary of an area or certain development zone and land uses. It defines the type of development and written statements, complimented with maps. The purpose is to translate the State Structure Plan into a more detail strategy of development.

To date, there is no specific law in Malaysia to regulate reclaimed land [1]. For that reason, the National Land Code 1965 will be the main reference while other related statutes are also relevant including the Environmental Quality Act 1987, Land Conservation Act 1960 and so forth [1]. Nevertheless, land matters fall under the state authority’s jurisdiction [9]. Concerning the Forest City in the State of Johor, the existing local plan had not specified the area as land, therefore any application for planning permission for a new development does not meet the local’s plan land designation and boundary. According to Section 18 (1) of the Town and Country Planning Act 1976 (Act 172), any use or permit for any land or building should only be allowed unless conforms to the local plan [10]. Moreover, the Johor Bharu Local Plan will assist development until the year 2020, and developers will have to wait for the local plan for revision and updated before planning permission is granted. For bigger
investors, this could hinder huge investments. These situations had become an issue to coastal development projects since the local plan cannot aid the planning permission process especially in terms of detail land-use zoning for the reclamation area. In the case of the study area, the existing Comprehensive Development Plan (CDP) overlaps with the present Johor Bahru Local Plan 2020. Thus, it is important to designate which development plan has the higher-ranking order as a reference for the development of the coastal reclamation area.

Also, this newly created land requires status ruling and be declared by the governing local authority. The reclamation area is located beyond the legal area provision of the local authority. This affects the border and management of the new land for its authority especially in terms of the decision-making process. Section 3 of the Local Government Act 1976 (Act 171) stated that the State Authority, in consultation with the Minister and Secretary of the Election Commission, may by notification in the Gazette declare any area in such State to be a local authority and define the boundaries of such local authority areas [11]. This will result in the issue of deciding the jurisdiction area. Therefore, the role of the liable authorities including the State Planning Council (SPC) is crucial especially in delineating the boundary and legal area of the responsible local authority. However, this is manageable and solvable. The complexity arises when a coastal reclamation area belongs to another Federal Government Statutory Body, for example, the Iskandar Malaysia Development Regional Development Authority (IRDA), which happens to be the regional authority for the selected case study.

For Forest City, there are two types of laws imposed directly onto the area, which are the Town and Country Planning Act (Act 172) and the Iskandar Regional Development Authority Act (Act 664). Act 172 specifies the provisions and requirements for State Structure Plan and Local Plan whereby Chapter 3, Sections 7-17 describes development plans. Other than that, Act 172 (Sections 18-31A) discusses planning control including the process and requirement for planning permission approval. Meanwhile, Act 664 describes the requirements for a Comprehensive Development Plan of the area. These two acts have direct influences on Forest City.

3. Method
This study employs a case study research design due to its small-scale study [12]. It applies the qualitative method as it deals greatly with policies and implementation procedures. [13] suggested that a qualitative research approach suits a case study research design. Also, based on previous similar studies, a case study is required to gain a better understanding of the implementation of coastal reclamation areas [4][5][8][14][15]. Through a qualitative approach, the data gathered were from government documents, expert interviews, and site observation. The analysis involved the process of coding according to themes and categories. The study applied analytic strategies through comparative analysis, narrative analysis, and domain analysis.

The study chose the Forest City in the State of Johor (within the Iskandar Region) as the case study based on the existence of coastal reclamation area and current issues of the provision of statutory and non-statutory documents. The rationale for selecting Tanjung Kupang because Forest City’s scale of development is massive, and because of this, the inconsistency of planning legislation will give an impact on the process of coastal development. Johor is the Southern Gateway to Malaysia, in the southern part of Peninsular Malaysia.

The study emphasizes the role and responsibilities of the local planning authority and the stakeholders of the study area. The main idea was to examine the variations of duties among the related agencies within the jurisdiction area. For that reason, the study adopts a qualitative approach by conducting interviews with specific agencies relating to the development of the study area. Primary data was obtained from the Johor Bahru Tengah Municipal Council (MPJBT) or also known as the Iskandar Puteri City Council, Johor Department of Town and Country Planning and Iskandar Regional Development Authority (IRDA). These agencies were selected because they act as administrative planning authorities for the area, which therefore makes planning decisions for any development. It was imperative to study the role of these agencies, as they are required to comply with the employed statutory and non-statutory documents for the area.

The selection of the Forest City in Tanjung Kupang as a case study was due to its background and known as one of the mega projects in Johor (Fig. 1 and 2). Initially, the Forest City was to become a
role model with a theme of a "Sustainable City Well Ahead of Its Times". The Johor government expects that the newly created islands will boost Johor’s economic growth and claimed that Forest City will be the first artificial island to obtain duty-free status on the 6th March 2016, together with other natural islands like Labuan, Langkawi, and Tioman, which are already known duty-free islands [16].

Meanwhile, secondary data came from governmental documents including the Johor Structure Plan 2020, Johor Bahru Local Plan 2020, Comprehensive Development Plan 2014-2025 and Draft District Local Plan Johor Bahru and Kulai 2025 (Replacement). Analysis of secondary data was performed through Content Analysis, which examined the policies, strategies or regulations imposed for new land from reclamation activities, thus investigating the practice of delivering those strategies and guidelines for reclamation projects.

4. Results and Discussion
Forest City reclamation area is estimated to create new land of 1,386 hectares for the whole four artificial islands, consisting of High-Tech Industrial Zone, Central Business District and Tourism Zone, Financial and Economic Districts, and Conference and Forum Zone [18]. The area consists of four artificial islands (Fig.3). During the early stage of the Forest City development, the original reclamation area was 1,978
hectares. However, it was eventually downsized to a proposed 1,386 hectares [19]. All four islands are estimated to complete in the year 2035. In November 2013, the alienation process was completed.

In the case of the Forest City, the present Johor Structure Plan 2020 has no direct policy that focuses on coastal reclamation development in Johor, thus no provision made for the Forest City. Otherwise, the Johor Structure Plan addresses the identification of potential areas such as coastal beach for certain development but compromising the sustainability of its nature. The policy suggests a strict control and monitoring of reclamation activities according to the law provision.

Additionally, the Johor Bahru Local Plan 2020, gazetted on the 16th August 2012, had not designated the new additional land for Tanjung Kupang of coastal reclamation area into the plan (comprising of Forest City). The actual plan had not included this new land (reclaimed land) but indicated just water body at the proposed site of the Forest City. Because of this, any new development including land reclamation requires planning permission from the Johor Bahru Tengah Municipal Council. Inevitably, the Johor Bahru Local Plan 2020 land-use zoning had caused developers to wait for the local plan for further review and update to pursue the development. Thus, development takes a longer period. Consequently, for bigger investors, this situation will result in the loss of interest and possibly change the location of investment. Concerning this, the preordained issue is for the local authority to decide whether to wait until the period of local plan to reach-up to 2020 before reviewing its local plan or find alternatives to save time and allow development to proceed. This has become an important issue in the development process for Forest City.

About the Draft District Local Plan Johor Bahru and Kulai 2025 (Replacement), the Draft Local Plan is not gazetted or in force yet. However, the proposed replacement or amendments of the current local plan had restructured the Johor Bahru jurisdiction boundaries due to the vast duties and roles of the Johor Bahru Tengah Municipal Council, hence controlling the development process within its territory. Nevertheless, in this Draft Local Plan 2025 (Replacement), the reclamation area had been demarcated which addresses land-use zoning as industrial (main component), commercial and residential areas. In the future, this proposed amended local plan will guide the Johor Bahru Tengah Municipal Council in assisting the developers, consultants, and investors in pursuing applications for new development planning permission. In this manner, once the Johor State Planning Committee has gazetted the Draft Local Plan 2025 (Replacement), it will become a legal document. This statutory document will assist
any development. The development must comply with the requirements and guidelines of this statutory document. Nonetheless, this is an imperative obligation to the local authority in the planning process especially the planning control department in the decision making for planning approval.

Other than the Structure Plan and Local Plan, the study also examined the Comprehensive Development Plan (CDP) 2014-2025, which is currently in exercise. The CDP was reviewed with the Forest City reclamation area since the Forest City is part of the Iskandar Regional Development (IRDA) areas. The study noticed that the CDP overlaps with the practice of the present local plan. The State Planning Committee approved the CDP but was not gazetted as it provides flexibility to the authorities in implementing the proposals under the local authority's regulations. Other than employing the local plan, IRDA had established this planning document to aid the development process of the Iskandar Region. Despite being a non-statutory document in the development process, it is still in practice. Hence, facilitates the development process within the Iskandar Region. However, the creation of the CDP had not demarcated the reclamation areas of the Forest City. Yet, the CDP is placed as an important reference for new development especially for economic development purposes and in terms of environmental guidelines.

Results also revealed that even though both Johor Bahru Local Plan 2020 and Comprehensive Development Plan (CDP) 2014-2025 had not delineated the new artificial islands of the Forest City, the proposed local plan replacement and the Comprehensive Development Plan had their strengths. Both statutory and non-statutory documents are considered functional in assisting the local and regional authorities (Johor Bahru Tengah Municipal Council and IRDA). However, the stakeholders must endure the establishment of the local plan amendments as it may take quite some time since it involves four local authorities. Still, both documents are relevant since the proposed amended local plan is intended for physical development, while the Comprehensive Development Plan focuses on the provision of economic development. Looking at the Forest City future, both documents can be a good source of reference for development (Table 1).

The study too learned that the coastal reclamation area for the Forest City had not complied with the present local plan but have been dealt with in the future local plan amendments (replacement). There is, however, no hierarchical order between the local plan and the Comprehensive Development Plan. These two documents are yet significant for the development of the Forest City and can be applied collectively. The local plan guides the local authority in decision-making for physical planning approvals while the Comprehensive Development Plan encourages the economic growth of the Iskandar region. Therefore, the future local plan amendments and the Comprehensive Development Plan will complement each other.

In terms of the legislative procedure, the study discovered that the coastal reclamation areas of the Forest City had adhered to the procedures just like other similar development. Only that, the issue of land title and status was not a straightforward process since there is no specific statutory act for the authorities related to coastal reclamation activities.

As for the role of the related authorities for the reclaimed areas of Forest City, the study revealed that even though the Forest City is situated within the Iskandar Region Development Authority's (IRDA) jurisdiction area, there is no conflict of roles and responsibilities between the Johor Bahru Tengah Municipal Council and IRDA. The most important authority in decision-making for planning permission is the local authority. IRDA's roles are to put planning policies and initiatives to the Federal and State governments, as well as the local authorities, in developing the Iskandar region. Due to that matter, the role of the local authority and IRDA is seen as essential for Forest City.

Based on those findings, the study suggests a revision of current legislation which may allow for development projects at coastal reclamation areas to be carried out legally. Otherwise, the process of granting planning approvals for coastal land reclamation should be reviewed if such activities or developments were not addressed in the local plan. Future approach to planning needs to consider the inevitable development like reclamation projects when devising development plans. As such, the current Comprehensive Development Plan should be reviewed and address the Forest City within its provisions since it is a working document for the region.
### Table 1. A Comparative Analysis of the Significance of the Local Plan (Statutory Document) and Comprehensive Development Plan (Non-Statutory Document) to the Forest City Feature

| Draft District Local Plan Johor Bahru and Kulai 2025 (Replacement) | Comprehensive Development Plan (CDP) 2014-2025 |
|---------------------------------------------------------------|-----------------------------------------------|
| Authority | Johor Bahru Tengah Municipal Council | Iskandar Regional Development Authority (IRDA) |
| Provision of Law | Town and Country Planning 1976 (Act 172) | Iskandar Regional Development Authority Act 2007 (Act 664) |
| Form and Content | Written statement and detail land use zoning plan for the planning process under the jurisdiction areas of Johor Bahru Tengah City Council. | Written statement and plan that outline the direction, policies and strategies in relation to the development of Iskandar Malaysia. The content of document more to economics plan and strategic that used to promote the development of Iskandar Malaysia. |
| Function | Assist the local authority in decision making process and planning permission approval. | As a guide and reference in promoting the development of Iskandar Malaysia. Facilitate the local authority development process. |
| Relating to the coastal reclamation development in Tanjung Kupang (Forest City) | There is detail information regarding coastal reclamation development in Tanjung Kupang., including a detail land use zoning of Forest City. The planning guidelines also provide provisions for Forest City development for compliance. Problem will arise if there are new areas and project that in the jurisdiction areas. This may cause amendment of the content and delay the process of gazetting the document. | There is no direct strategy or guideline as imposed in the draft local plan (replacement). The CDP’s content addresses more of economic plan as guidance and reference for Iskandar Malaysia. In fact, the present CDP had not designated boundaries for Forest City development. This is because the Forest City was informed later after the preparation of the CDP. However, this will not affect the content and implementation process of this document or the delivery of Forest City development since the local plan is the statutory plan for the area. |

Based on the investigation, it was distinct that there was no zoning addressed for Tanjung Kupang as the Local Plan puts it as a committed water body. The present local plan had not positioned the Forest City in Tanjung Kupang as a reclamation area. Thus, this affects the development process especially during the stage of planning permission process. Planning approvals were not easy and became complicated because there were no details of guidelines for the Forest City, nor zoning demarcation for the area. For that reason, it was clear that either statutory or non-statutory documents could affect the planning process of reclamation development because of the absence of law and regulations relating to guidelines and zoning of the reclaimed area. Learning from the experience that the Forest City had faced due to the weakness of the statutory document (the Local Plan) and the non-statutory document (the Comprehensive Development Plan), future statutory and non-statutory documents, which include the coastal area, should consider adding regulations on zoning and guidelines. It should anticipate that there could be possibility of land reclamation project along the coastline. This would be handy in the future and inevitably provides a prospect to the coastal area.
5. Conclusion
The present Johor Structure Plan 2020 and existing Johor Bahru Local Plan 2020 (Statutory document) had not addressed the Forest City reclaimed land within the policies and plans. The present Comprehensive Development Plan 2014-2025 (Non-statutory document) established by IRDA too had not demarcated the Forest City into their plan. The current Johor Bahru Local Plan 2020 depicts the new artificial islands as a water body in its plan. This had caused issues in land use zoning and guidelines for reclamation activities and projects. However, the future Draft District Local Plan Johor Bahru and Kulai 2025 (the replacement document) had specifically addressed the Forest City within the policy context and draw guidelines for the future development of the designated areas in terms of land use zoning. Because the local plan focuses on physical planning and the CDP concentrates on economic aspects, hence, both statutory and non-statutory planning documents are relevant for the reclaimed areas of the Forest City. Nevertheless, for better future planning, the current CDP should be reviewed and include the plan for Forest City development within its provision context. Also, the future approach to planning should consider any unavoidable changes that may occur within its jurisdiction boundary like coastal reclamation activities and therefore avoid the issue of non-compliance of land use zoning with the statutory document.

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