



# Form-Based Urban Planning Codes for Trinidad & Tobago: An Exploratory Study



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# Form-Based Urban Planning Codes for Trinidad & Tobago: An Exploratory Study - FINAL REPORT and RECOMMENDATIONS

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## 1. INTRODUCTION

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Globe Consultants International Ltd was appointed to assist the Ministry of Local Government of the Republic of Trinidad & Tobago in developing prototype urban “Urban Form-Based Planning Codes” for modelling at the Local Government level. The study built on – and supplemented – work already undertaken (by Globe and its predecessor firm, Lichfield Planning LLP) during 2009/10 when a Generic Urban Design Framework for Trinidad and the *uDesignTT* website were prepared and used in the preparation of Municipal Development Plans. The project was financed under the Ministry of Local Government’s Public Sector Investment Programme.

### Modules

The study was undertaken in four modules:

- Module 1: **Development Management Now** – looking at the ways in which urban design features in the current procedures for considering and deciding applications for planning permission and starting to consider the feasibility and potential benefits of moving from a conventional system of “Development Control” to one based on the concept of “Development Management”;
- Module 2: **Green Design** – starting to consider ways in which a different approach to urban design and development could reduce harmful environmental impacts and produce more efficient places for people;
- Module 3: **Review of Best Practice in Urban Form-based Coding and similar approaches** – taking a selective and comparative look, internationally, at the development and application of both Form-Based Coding and other systematic approaches to urban design and planning;
- Module 4: **Prototype Urban Form-based Codes (or similar) for 2 of Trinidad’s Urban Centres** – trialling and testing the application of Form-Based Coding in two locations, Chaguanas and Tunapuna, so as to inform decisions regarding the wider application of this and / or other methods in Trinidad and Tobago.

The study was undertaken between July and December 2012 by a team led by Globe Consultants International Ltd and including professionals from the Ministry of Local Government and the Ministry of Planning and Sustainable Development's Town and Country Planning Division, whose knowledge, guidance, enthusiasm and invaluable assistance was greatly appreciated.

## **Definition of a Form-Based Code**

*“Form-based codes foster predictable built results and a high-quality public realm by using physical form (rather than separation of uses) as the organizing principle for the code. They are regulations, not mere guidelines, adopted into city or county law. Form-based codes offer a powerful alternative to conventional zoning.*

*Form-based codes address the relationship between building facades and the public realm, the form and mass of buildings in relation to one another, and the scale and types of streets and blocks. The regulations and standards in form-based codes are presented in both words and clearly drawn diagrams and other visuals. They are keyed to a regulating plan that designates the appropriate form and scale (and therefore, character) of development, rather than only distinctions in land-use types.*

*This approach contrasts with conventional zoning's focus on the micromanagement and segregation of land uses, and the control of development intensity through abstract and uncoordinated parameters (e.g., FAR, dwellings per acre, setbacks, parking ratios, traffic...), to the neglect of an integrated built form. Not to be confused with design guidelines or general statements of policy, form-based codes are regulatory, not advisory. They are drafted to implement a community plan. They try to achieve a community vision based on time-tested forms of urbanism. Ultimately, a form-based code is a tool; the quality of development outcomes depends on the quality and objectives of the community plan that a code implements.”*

The Form Based Codes Institute

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## 2. SUMMARY OF THE MODULE REPORTS AND CONCLUSIONS

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A detailed report was produced for each module of the study, setting out findings, conclusions and recommendations relating to the particular topic. The full module reports are all available separately. The reports relating to Modules 1, 2 and 3 are summarised briefly in this section, together with the main conclusions drawn from each. The two reports resulting from Module 4, Prototype Urban Form-based Codes for Chaguanas and Tunapuna, are also available separately but are not summarised here as they need to be read in their entirety. The process of preparing those Prototype Form-Based Codes has, however, informed the recommendations set out in the final section of this report.



## Module 1: Development Management Now

This module of the study looked at the ways in which planning applications are currently considered and decided and, in particular, the role of urban design in that process. Interviews were conducted with a number of people who have substantial experience of the current planning system as “customers” (applicants, architects, agents) or as “administrators” – or, in some cases, both<sup>1</sup>. Consideration was then given to the feasibility and potential benefits of moving from a conventional system of “Development Control” to one based on the concept of “Development Management”.

The six interviews provided some quite diverse opinions and insights regarding the current development control system, but certain common perceptions emerge, notably:

1. The current system is not seen to be delivering high – or even adequate - standard of urban design in new developments;
2. There is at present something of a policy vacuum which leads to some apparent inconsistencies in decision making;
3. Current Planning Guidance is out-dated in its approach to urban design;
4. The principle of applying Planning Standards is long-established and generally accepted, although the current standards and the ways in which they are applied are not necessarily considered to produce good development;
5. Form-based Codes and Performance-based Standards should be explored as part of a process of reviewing and modernising the planning system;
6. Urban design needs to be embedded fully within the planning system (rather than being treated as an “add-on”) if real improvements are to be achieved.
7. It will be important to involve “stakeholders” in the planning, design , architecture and development sectors in the process;
8. If greater emphasis is to be placed on achieving better urban design (and all the interviewees agreed that this is desirable), there will be a need to provide design-orientated training / capacity building for planners, both in university and on the job.
9. TCPD staff appear to support a change of approach, in principle.

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<sup>1</sup> Mr Arnim Cozier (planner); Mr Gerry Frontin (planner); Ms Sheryl Anne Hayes (civil servant); Mr Tim Mooleedhar (planner); Mr Mark Raymond (architect / designer); and, staff from the Ministry of Planning and Sustainable Development’s Town & Country Planning Division

## Development Control v Development Management

Although the term “Development Management” is sometimes used synonymously with “Development Control” it involves some fundamentally different approaches to the processes of administering, considering and deciding planning applications. Some key differences have been summarised in the comparative table below, borrowed from the UK’s Planning Officers’ Society:

Development Control	Development Management
<b>Purpose is seen as to control development to minimise harm and enhance the quality of the final product, with a focus on processing applications</b>	Purpose is seen as to manage development to maximise achievement of planning objectives, including ‘place-shaping’ & high quality, with a focus on the pre-application stage
<b>Restricted to land use matters</b>	Includes spatial considerations as expressed in the RSS + LDF & SCS etc.
<b>Restricted to considering planning applications and other consents</b>	Includes working with partner agencies to ensure implementation of other actions in the plan, e.g. delivery of infrastructure
<b>Other agencies are consultees in the process</b>	Key agencies are named as partners in the plan’s objectives & work jointly to secure the agreed development.
<b>Asks “What do our policies say about this?”</b>	Asks “What are we trying to achieve, how do our policies reflect this, and how does this proposal measure up?”
<b>The development plan is the main determinant of decisions</b>	Looks beyond the development plan to the sustainable community strategy to illuminate “what are we are trying to achieve?”
<b>Requires interpretation of national, regional &amp; local policy</b>	Calls for similar interpretation and also an evaluation of proposals against spatial vision, objectives and policies
<b>A focus on separate environmental, economic, social &amp; resources issues raised by proposals</b>	A focus on the sustainability and the likely outcomes of proposals
<b>Asks “Is this proposal good enough to approve or bad enough to refuse?”</b>	Asks “Can this proposal help to achieve our spatial vision and objectives?”

## **MODULE CONCLUSIONS**

It was clear from this module of the study that many of those involved in planning and development in Trinidad and Tobago feel that the Planning system as currently structured and operated is not producing good urban design or good development generally. There also appears to be a strong desire – almost a “hunger” – to redress this. It is clear that Trinidad and Tobago currently operates a (now rather dated) “Development Control” system, as distinct from a more proactive “Development Management” system. Again, there appears to be a desire to change this.

Several recent initiatives, including the incorporation of urban design components within all the recent Municipal Development Plans, have sought to introduce improvements and these have, so far, had some – albeit limited – impacts in practice. At present, current legislation, guidance, accumulated “standard practice”, and the ways in which resources are deployed, all appear to be restricting the progress that can be made. However, changes due to be introduced through enactment of the Planning and Facilitation of Development Bill, together with the adoption of a new National Spatial Development Strategy, providing the context for a review of Municipal Development Plans and Local Area Plans, make this a very good time to consider the introduction of an approach such as Form-Based Codes as part of the on-going process of modernising and improving the Nation’s planning system and devolving planning to regional / local level. Within that context, replacement of the current “Planning Standards” by new “standards” and performance criteria based on urban design principles (which could include Form-Based Codes as part of a larger “toolkit”), appears to be feasible and desirable. There are, however, understandable concerns that this will involve a substantial redirection of resources and will require significant training.



## Module 2: Green Design

The second module considered ways in which a different approach to urban design and development could help to reduce harmful environmental impacts and produce more efficient places for people.

Attention was focused on “Green Urban Design”, as distinct from “Green Architecture” or “Green Construction”, but all these (and other) closely interrelated subsets of “Green Design” are relevant to the consideration of the possible application of Form-Based Coding to urban planning in Trinidad and Tobago. The aim was to provide an outline of Green Urban Design considerations and issues and to make an initial assessment of the extent to which these could be incorporated within a Form-Based Codes approach to urban planning.

### DEFINITION OF GREEN URBAN DESIGN

Green Urban Design is the design process that creates places in which people can live, work, learn and carry out all the activities and interactions they need to, with minimal harm to the local and global environment – ideally no harm at all. Key factors in Green Urban Design include:

- Minimising (ideally eliminating) consumption of energy from non-renewable sources during the construction of places and buildings and during the lifecycle (the whole period of their use);
- Making maximum use of renewable and locally sourced construction materials;
- Developing urban forms – street patterns, layouts, transport routes and systems etc. – that facilitate low / zero emissions of carbon from cooling of buildings, heating of water, travel etc.
- Designing and creating places so as to safeguard local and global ecosystems from harm and to blend manmade environments with natural environments synergetically.

It was apparent that there is actually relatively little published, authoritative information on the specifics of Green Urban Design for tropical places generally - and even less relating to Small Island Developing States (SIDS). By contrast, there is a wealth of information available for places with temperate and colder climates, and urban design thinking tends to be dominated by principles derived from those environments. Whilst many of those principles have almost universal application, others are simply not transferable to tropical environments. Caribbean Historian, Gerard A. Besson, phrased the matter very succinctly

in a recent article in the Carribean History Archives: “Architecture in the tropics is best based on a simple principle: keep the sun and the rain out and let the breeze in. Simple!”. That principle can be applied as much to urban design as to architecture.

From initial research and consideration of Green Urban Design issues of particular relevance to Trinidad and Tobago, it was decided that attention should be concentrated initially on two interrelated topics: siting and orientating buildings to increase efficiency of energy use; and creating walkable (shaded and sheltered) streets and useable public space. The module report provided an overview of each of those topic areas, together with some initial conclusions about appropriate urban design responses and the potential for addressing these in Form-Based Coding, as outlined briefly below.

### **Siting and orientating buildings to increase efficiency of energy use**

There are two main urban planning and design considerations here:

- minimising the energy consumed when travelling between buildings -
  - Urban planning and design measures include:
    - Allowing for mixed uses where possible, to enable more people to carry out many of their other day to day activities within a walkable area, if they wish to do so;
    - Concentrating facilities that are used by large numbers of people in places where access by public transit is convenient and where people can use one trip (whether by transit or car) to carry out several tasks;
    - Creating safe, shaded, sheltered and attractive routes between the places people use.
- minimising the energy consumed when using buildings –
  - Urban planning and design measures include:
    - Siting, orientating and designing buildings – and choosing appropriate building materials - so that they stay cooler naturally, by maximising the effects of shade, convection, breezes and through-drafts, and the cooling effects of vegetation and water,

- trying to orient buildings so as to limit east and western wall exposure;
- using tree and shrub planting to achieve more shading and to encourage ventilation and cooling from prevailing winds.
- Innovative approaches, such as “green walls” (using vertical space to introduce vegetation), and the promotion productive of urban gardens and urban farms, contributing to air cleansing and cooling and to productivity and community cohesion.

### **Creating walkable (shaded and sheltered) streets and useable public space**

- Creating shade and shelter in urban streets –
  - Urban planning and design measures include:
    - Planting trees in and adjacent to the streets to create shade and shelter;
    - Shadows cast by buildings fronting the streets;
    - Overhanging projections from buildings such as canopies and balconies;
    - Creating and maintaining urban spaces like squares, parks gardens and wide promenades - places where people can enjoy a bit of time out, liming, resting, passing the time of day, playing games or whatever;
    - Using grid-iron street patterns, which offer distinct advantages in terms of permeability and connectivity – making it as convenient as possible to walk from one place to another by minimising distances to be travelled;
    - Orienting streets so as to allow the air to flow through with as little interruption as possible to maximize the potential for natural cooling of both streets and buildings;
    - Incorporating green spaces as important environmental assets in urban places.

## **MODULE CONCLUSIONS**

The combination of depleting supplies (and rising prices) of carbon-based fuels and concerns about the environmental impacts of using them point to an urgent need to plan for lower consumption and greater use of non-carbon alternatives. At the same time other human impacts on the natural environment need to be reconsidered and it seems likely that a more ecologically based approach to living will be required. The way we plan, develop and change urban places can play a significant part in this. Coding can be a useful tool in achieving this.

There is a distinction between “Green” design and “Sustainable” design. In essence “Sustainable” design seeks to achieve social, economic and environmental solutions that can be perpetuated indefinitely. “Green” design focuses more specifically on the environmental aspects. In essence, “Green Urban Design” is therefore a component or subset of “Sustainable Urban Design”. This distinction is of more than academic significance in the context of this study. The Form-Based Codes approach to urban design derives from a number of social and economic objectives, as well as environmental objectives. Up to now, Form-Based Codes have been developed mostly from the perspective of developed northern countries – principally the USA. Whilst, in very broad terms, social and economic objectives may not be too dissimilar, the local environmental and climatic context of most of North America is very different from that of Trinidad and Tobago.

Urban design principles and guidance need to be informed by local conditions and it is dangerous to adopt the approaches relevant to places subject to very different enviro-climatic conditions – and cultural expectations and inheritances - without questioning their applicability to local circumstances and making appropriate variations and adaptations.

There appears to be a need for further research and development work on this topic, beyond the scope and remit of the Form-Based Codes project.

### Module 3: Form-Based Coding and similar approaches

The overall purpose of this study was to consider whether a particular type of urban form coding – the Form-Based Code – would be appropriate to the circumstances and requirements of Trinidad and Tobago and could help to improve the quality of urban design and development. This third module took a selective and comparative look, internationally, at the development and application of both Form-Based Coding and other systematic approaches to urban design and planning. It considered some examples of urban form coding in practice, in different countries. It was found that approaches vary significantly according to different cultural, legal and environmental contexts.

Form-Based Codes are just one particular modern variety of urban form coding, an approach to place-making that has been practiced over many centuries in many different parts of the world.

#### Purposes of codes

Historically, reasons for introducing urban form and building codes have varied from time to time and place to place but the various purposes can be grouped in to three (3) basic categories:

- **Utility** - these codes seek to achieve particular standards in matters such as public health, safety (especially fire prevention), traffic management, nuisance minimisation, open space provision etc;
- **Physical form and fabric** - these codes seek to conserve or create places of particular urban or architectural character and place an emphasis on aesthetics;
- **Social objectives** - these codes seek to create conditions conducive to community identity, social solidarity etc (or, conversely, social stratification / segregation).

In many cases, codes have actually had more than one underlying purpose, and that is certainly the case with Form-Based Codes.

#### THE DESIGN CODE

*“Most design codes consist of – a plan that identifies exactly where in the masterplan particular requirements apply*

*and urban regulations which generally control building type placement and the location of parking.*

*Design codes also dictate building materials and how the materials are used.*

*Design codes may dictate a specific style or styles but this is not essential – it depends on the vision.*

*The most widely accepted practice is that the materials and methods of construction grow out of local practices which have a demonstrated record of success”.*

Extract from “The Kentlands Code”, an article by Mike Watkins of Duany Plater-Zyberk published on Rudi.net (<http://rudi.net/books/15901>)

In this context, the TCPD's current Planning Standards, which were formulated several decades ago, appear to be heavily focused on "utility", and to have rather less concern for "physical form and fabric" and "social objectives" (although in the absence of any written explanation or reasoning, it is difficult to determine the degree to which those considerations may also have featured in the formulation of the standards).

### **Relationships codes seek to influence**

In essence, codes focus on the spatial relationships that can make the difference between successful and unsuccessful places. This includes, in particular, relationships:

- between buildings / structures and the public realm;
- between one building and another (looking at scale, form and mass);
- between different types and scales of street and urban block;
- between the built environment and its natural context.

Generally – although not in every case – codes seek to quantify spatial relationships such as those by specifying distances, heights etc. accordingly. Some codes, though, place greater emphasis on qualitative aspects and performance criteria that may be expressed verbally rather than numerically.

As Trinidad and Tobago's planning system has drawn on an adaptation of Britain's 1947 Town and Country Planning Act as its legal basis and has overlain this, to an extent, with some American-style use of zoning and standards, this module concentrated on an exploration of best practice in those two countries, plus two other countries (Australia and the Netherlands) from which interesting insights in to the use of different approaches to coding may be gained.

### **FORM-BASED CODES - USA**

Form-Based Codes are a particular type of urban form coding that has developed from the reaction against the effects of applying traditional ("Euclidean") zoning in the USA. The New Urbanism movement has similar origins and the two are closely related. It should be noted, however, that Form-Based Coding does not necessarily advocate any particular architectural style (although some codes for particular places may do so), whereas New Urbanism tends to promote a "Neotraditional" approach to architecture as well as urban design.

Form-Based Codes aim to:

- emphasise urban form more than segregation of uses;
- consider and control uses still – but as part of integrated approach;
- keep, enhance or create places with distinctive character and identity;
- produce places that work well and are liveable and sustainable;
- Express aspirations of people who live and work there or use the place in other ways;
- provide PREDICTABLE outcomes.

According to the Form-Based Codes Institute, *“Form-Based Codes foster predictable built results and a high-quality public realm by using physical form (rather than separation of uses) as the organizing principle for the code. They are regulations, not mere guidelines. They are adopted into city or county law. Form-Based Codes are an alternative to conventional zoning”*.

The Code comprises:

- **Regulating Plan** - allocating plan zones and their corresponding land uses;
- **Building Form Standards** - providing regulations for buildable areas, required frontage conditions, and acceptable land uses for each zone of the Regulating Plan;
- **Additional Standards** - providing regulations for frontage types and parking requirements.

## **BUILDING FOR LIFE - UK**

The UK’s approach to urban planning and urban design is based more on policies and guidance than on zones and specific standards. Although standards are routinely applied to some aspects of planning, particularly highway design, and in some places to matters such as plot development ratios (mainly in London), the use of guidance and locally derived policies is the norm generally. Statutory zoning does not exist in the UK in the way that it does in the USA. The closest equivalent is “allocation” of land in a Development Plan, but this is likely to relate to a policy or series of policies that cover more than land-use requirements alone and may, for example, include performance criteria.

A type of coding that has been pursued more widely over recent years in the UK is a rather looser type of performance criteria-based coding, of which “Building for Life” (BfL) is probably the most widely used example. BfL comprises a series of question-led criteria for assessing the design quality of new homes

and neighbourhoods. The criteria reflect the importance of functionality, attractiveness and sustainability in well-designed homes and neighbourhoods. BfL was developed by the Commission for Architecture and the Built Environment (CABE) – a former government agency that has now been subsumed within a charitable organisation called the Design Council - in partnership with, amongst others, the Home Builders Federation (representing the house-building industry) and the Civic Trust.

There were originally 20 questions, or criteria, to assess the design quality of new housing developments, and a numerical score was calculated from the answers. Scoring was undertaken by accredited assessors from local authorities. BfL was first published in 2002 and then revised in 2008. A new version of BfL has just been published – Building for Life 12 – with the number of questions / criteria reduced from 20 to 12 and now without a numerical scoring mechanism, as this was found to produce inconsistent and misleading results. Instead, a “traffic lights” system has now been introduced for assessment purposes:

**Green Light:** the relevant element of the development meets the BfL requirement;

**Amber Light:** getting there, but need to rethink whether this element can be improved;

**Red Light:** this aspect of the development needs to be reconsidered.

Each of the 12 main questions is supplemented by several more detailed questions. The intention is for developers and designers to address these questions as part of the design process and then for them to be used to evaluate the outcome. Building for Life 12 is not presented as a “code” in the conventional way, but its questions express a set of design performance criteria which the developer / designer must seek to satisfy in ways that are appropriate to the development and its context. Further information about Building for Life, together with downloadable documents, can be found at this website:

<http://www.designcouncil.org.uk/our-work/cabe/sectors/housing/building-for-life>

Building for Life attempts to promote good urban design by getting designers and developers to ask themselves a series of questions relating to the performance of the proposed development and then assessing the results independently. It should be noted that this is a voluntary scheme and so, in itself, it carries no statutory regulatory weight (unlike Form-Based Codes in the USA). However, it is open to local planning authorities to use the questions as the basis for policies to be included in Local Plans and such policies would, once the Plan has been formally adopted, then carry statutory weight and would be material considerations when planning applications are being determined.



## **PERFORMANCE-BASED CODES – AUSTRALIA**

The northern Australian state of Queensland may be a very different place to Trinidad and Tobago but there are similarities that are relevant to this study. For example, both have tropical climates and both had originally inherited a British planning system.

Queensland introduced a new regulatory system for planning in 1998, beginning with the Integrated Planning Act 1997. This introduced a code-based planning system. A new set of approval processes was also established, which included:

- **Exempt development** – does not require approval before a commencement of use or works;
- **Self-assessable development** – does not require approval, but which an applicant must determine satisfies a code or codes;
- **Code assessment** – development requiring approval that must satisfy the requirements of a code or codes (the scope of assessment is limited to the matters contained in the code); and,
- **Impact assessment** – development requiring approval that must be assessed using a broad range of criteria (not limited by any code).

Mostly, the codes are performance based. They set out performance criteria, or standards, that must be met. In most cases they also describe an “acceptable solution” - one way in which the particular performance criteria can be met. Where a proposal meets the “acceptable solution” it is deemed to satisfy the performance criteria. There is, however, scope for alternative solutions to be proposed and these too may be acceptable provided they can be demonstrated to meet the performance criteria.

The Queensland system is particularly interesting because it combines the clarity of Form-Based Coding with the flexibility of Performance-Based Criteria. The format makes the objectives underlying each requirement explicit and the inclusion in each case of an “acceptable solution” as an example but not as “the only answer” allows ample scope for creativity and innovation.

## **CODING IN AMSTERDAM – THE NETHERLANDS**

Design codes have been introduced quite recently in the Netherlands as an informal mechanism in the country’s evolving planning and design process. Like Britain, the Netherlands has quite a complex system of planning policy and guidance. Design codes exist but their preparation is not mandatory.

Dutch design codes are generally site based. The Local Authority and/or developers decide that coding will take place, and codes are then prepared by an urban designer on behalf of the developer.

Whilst the content of each code is site specific, there is a common structure for code documents:

1. Objectives: the characteristics sought
2. The content: How to establish the desired character
3. The process: such as roles of key stakeholders, lines of responsibility, etc.

The Dutch example of urban form coding appears to produce good results when applied, as it generally is, to large scale new development areas. It appears to be less suitable for smaller scale and infill development in established urban areas, but there are, nevertheless, some potential lessons regarding stakeholder engagement in the process and the benefits of having a “champion” to drive the delivery of the desired development forwards.

## MODULE CONCLUSIONS

This module of the study looked at only a few examples of urban form coding in practice, in different countries. It was clear, however, that approaches vary significantly according to different cultural, legal and environmental contexts. It would probably be a mistake to attempt to import a method such as Form-Based Codes from the USA to Trinidad and Tobago without adaptation to suit local circumstances and expectations. However, it seems likely that Form-Based Codes could form a significant part of a workable system, provided the demands on resources involved in preparing codes for the nation's towns and cities are recognised and accepted.

If a system involving some type of Form-Based Codes is to be introduced, it is clear that a number of commitments will be necessary, including:

1. Code preparation and use must be undertaken on the basis of sound principles, resourced appropriately by skilled, multi-disciplinary professionals, and given appropriate time for formulation, adoption and implementation. Adequate resources, including professional resources, will need to be made available, nationally and locally, to ensure that codes are well produced and address the relevant issues clearly. This includes investing in the skills of planning staff so that they can both prepare and use the codes effectively.
2. Locally elected representatives and communities must be engaged in the coding process, so that the codes are fully informed and can command local respect;
3. Codes should be drafted with a consistent approach, so as to avoid ambiguity, but they should be tailored to each place's / community's particular context and circumstances;
4. Applicants for planning permission should be required to identify clearly how their proposals satisfy code requirements.
5. There should be sufficient flexibility (ie, allowing for alternative methods of satisfying code objectives) to avoid stifling creativity and innovation.
6. An effective enforcement mechanism is essential (but this applies to any form of planning control, or development management, not just to coding).

A "hybrid" approach that draws on aspects of Form-Based Coding, as practiced in the USA, and aspects of Performance Criteria as used in the policies pursued by many local planning authorities in the UK and, in a different form, in Queensland, Australia may be suitable for Trinidad and Tobago.

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### 3. STUDY CONCLUSIONS and RECOMMENDATIONS

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Form-Based Codes could be useful in some places and circumstances, as outlined below, BUT we do not believe that it would be either necessary or practicable to prepare them for all - or even most - settlements. The process is very resource-hungry (professional time and financial cost) and the resulting codes will not, in themselves, necessarily help to produce a better standard of development or better places in every case.

Form-Based Codes may, however, be helpful in particular places and circumstances, such as:

- \* existing places where significant change and development is proposed in a comprehensively planned form (eg, the proposed remodelling of Ramsaran Street in Chaguanas to form a new boulevard with a particular concentration of uses and activities planned);
- \* new developments of a scale and nature that will create new places, and where a particular form and character is desired (eg, a new estate or sub-division).

Although we do not recommend widespread application of the Form-Based Codes approach in its entirety, we believe that there would be significant benefits in undertaking some of the preparatory work associated with Form-Based Code formulation in most if not all communities, as time and resources allow. The aspects we recommend for such widespread application focus on identifying current characteristics of a place (both positive and negative / good and bad) in a “character appraisal” (eg, “Placecheck”), and then formulating an agreed and achievable vision and establishing clear design criteria to guide change and development towards the achievement of that vision.

We believe that “Building for Life”, as developed and used in the UK, and Performance-Based Criteria, as applied in Queensland, Australia, both provide models that could usefully be adapted for application in Trinidad and Tobago, and in the Appendix to this report, we have suggested a series of question-based design criteria for consideration.

Although, there would undoubtedly be a need to train Planning staff to ensure that they are equipped to apply the criteria consistently and in a well-informed way - and probably to undertake some wider education for developers and designers to ensure that they understand the approach and the intended benefits, we believe that this would be less demanding of public resources than wholesale application of Form-Based Coding and could produce more sustainable benefits overall.

Regarding the current “Planning Standards” we recommend that these should be replaced as soon as possible with new guidance and policy at several levels:

1. General urban design principles and policy guidance, criteria and procedural guidance to be incorporated within the new National Spatial Development Strategy (NSDS);
2. Place-specific local guidance and policy (consistent with that in the NSDS) to be included (reviewed and developed further) in the regional and local area plans (these may take the form of character appraisals, vision statements, local design criteria and, where appropriate Form-Based Codes);
3. Introduction of a “Development Management” approach to the handing of planning applications, with most decisions taken at the regional / local level and with design quality identified clearly as a material consideration;
4. A requirement that applicants for planning permission should provide statements in response to “Building for Life”- type questions so that the urban design rationale behind each significant development proposal may be properly assessed (by requiring designers to think about the criteria and explain how they have been addressed, this should lead to improving standards of design over time).

The Planning Standards contained in the TCPD’s “Guide to Developers and Applicants for Planning Permission” are themselves a form of urban form code; they “*create order without the use of predetermined ground plans*”. However, interviews and discussions undertaken during the course of the study confirmed a general dissatisfaction with many of the places created by applying the current standards / code. The purpose of the study was to explore a different approach to urban form coding to see whether it could help to create better, more sustainable places.

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## APPENDIX: TOWARDS A QUESTION-BASED, PERFORMANCE CRITERIA APPROACH TO IMPROVING URBAN DESIGN STANDARDS

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Taking inspiration from Building for Life, the following questions could be asked when development proposals are being prepared and assessed. This list is only a starting point – a basis for further discussion, consideration and development if an approach such as this is thought to have merit. The topic headings are those used in the Generic Urban Design Framework for Trinidad and Tobago.

### Distinctive

- Does the place already have its own clear and distinctive character and identity?
  - if so, will the development maintain or enhance it?
  - if not, will the development help to give the place a more distinctive character and identity?
- If the development creates new streets and / or public spaces
  - will it be easy for people to find their way around?
  - will buildings be designed and positioned so that they define and enhance the streets and spaces?
  - will buildings turn street corners well?

### Safe

- Will the development help to keep (or make) this place safe for people to live in or use?
  - Will it add to (or create) natural surveillance of public areas (more eyes on the street)?
  - Will it create places where criminal and anti-social behaviour can go unseen?
  - Will it add life to the street?
  - Will it create “dead” areas where people may feel unsafe?
  - Are streets designed in a way that encourage low vehicle speeds and allow them to function as social spaces?

### Well Connected

- Will the development be well integrated with its surroundings?
  - Will it maintain existing connections?
  - Will it create new or better connections where they are currently poor?
  - Will it help to reduce car dependency?
    - Will there be good, safe connections for pedestrians (including people with restricted mobility)?
    - Will there be good access to public transport?
- If people will live here, will they have safe and convenient access to local community facilities, such as shops, schools, places of worship, workplaces,

parks, play areas, bars, cafes...?

- If people will work here, will they have safe and convenient access to support facilities?

### **Adaptable & Manageable**

- Is the development capable of adaptation to alternative uses if demand conditions change?
  - Will it be readily capable of extension or alteration if user requirements change?
- Will public and private spaces be clearly defined and designed to be attractive, well managed and safe?

### **Easy on the Environment**

- Will the development take advantage of existing topography, landscape features (including water courses), wildlife habitats, existing buildings, site orientation and microclimates?
  - Will the orientation, siting and design of the development help to reduce the need to use artificial (energy-consuming) ventilation and cooling?
  - Does the development incorporate any measures of make use of renewable energy?
  - If the development will create new public streets and spaces (or affect existing ones), does it include measures to create shade and shelter?
- Have building materials and construction methods been chosen with a mind to minimising environmental impacts throughout the building's life?
- Will measures be taken to minimize rainwater run-off (eg, using permeable ground surfacing, "harvesting" rainwater)?