

*Queensland*  
*Land*  
*Information*  
*Strategy*

**Establishment of Coordination for the  
Built Environment Theme**

**Final Report  
to QLIC**

*24 February 1997*

# Document History

**Status:** **FINAL DRAFT**

**File Name:** p:/common/gmc/reports/qlic\_fin.doc

**Date:** 24 February 1997

**Author:** Graham McColm  
Acting Coordinator, QLIS Built Environment Theme  
Information Services Unit  
Department of Emergency Services  
Level 10 Forbes House  
30 Makerston Street  
Brisbane Qld 4001

Phone 3247 4023                      Fax 3247 4257

# CONTENTS

1.0	Purpose	1
2.0	Background	2
3.0	Update of Progress	4
4.0	Theme Coordination in Review	7
4.1	The Current Model of Theme Coordination	7
4.2	Expectations for the Built Environment Theme and QLIS	9
4.3	A SWOT Analysis of QLIS and Theme Coordination	11
4.4	Thoughts from the Department of Emergency Services as a Theme Coordinator	13
4.5	Sustainable Theme Coordination	14
4.6	Major Issues for Theme Coordination and QLIS	16
5.0	Summary and Recommendations	17

# APPENDICES

Appendix 1	Summary of Key Targets to Establish Theme Coordination	19
Appendix 2	Summary of Progress for the Built Environment Theme Coordinating Committee (BETCC)	20
Appendix 3	Interim Work plan	21
Appendix 4	Discussion of all Proposed Operational Activities	22
Appendix 5	Budget Summary	28

## **1.0 PURPOSE**

The purpose of this report is to finalise the commitment by the Department of Emergency Services to the Queensland Land Information Council (QLIC) to establish the coordination for the Built Environment Theme.

The report builds upon the progress report "*Blueprint for Built Environment Information, Sep 1996*" prepared by the initial Theme Coordinator, Mr Ken Granger and submitted to QLIC at its meeting on 31 October 1996.

An update of activities which have commenced is provided and a proposed Work plan is presented. Some issues and experiences of a Theme Coordinator and theme coordination in general are also discussed. These issues are applicable to how QLIS may manage its activities in the future in consideration of the QLIS Benefits Study and the Review of QLIC.

In finalising this establishment phase of Built Environment Theme Coordination, I would like to have formally recognised the significant efforts of Mr Granger, the initial Theme Coordinator, to establish the Theme.

## 2.0 BACKGROUND

In December 1995, an agreement was reached between QLIC and the Department of Emergency Services to establish a process for coordination of the Built Environment Theme for the Queensland Land Information Strategy (QLIS). The project was to run for twelve months until the end of December 1996.

The terms of reference for establishing the Built Environment Theme were:

- to define the extent and appropriate contents of the Built Environment Theme, particularly those features identified in the *QLIS Foundation Information Standard*;
- to design, develop and pilot a process to coordinate the development of the Built Environment Theme.

In establishing the project, the key targets accepted by QLIC were:

- establish a Theme coordinating committee and stage a major client/stakeholder workshop by the end of February 1996;
- complete an audit of public sector built environment information holdings and client needs analysis by the end of March 1996;
- deliver a draft data model and data dictionary, for community features data, for QLIC endorsement by end of May 1996;
- complete a pilot project of built environment information management to include (at least) the priority elements identified by the needs analysis to cover the local governments of Gold Coast, Logan, Brisbane, Ipswich and Cairns, by end of June 1996;
- expand the pilot project to cover the remainder of south-east Queensland by December 1996 and the remaining provincial urban centres by end of June 1997;
- report to QLIC on the development of the Theme with a view to confirm the Theme operational plan by end of December 1996.

Significant funding was provided by QLIC from its cross agency fund to resource the project including a theme coordinator and a temporary research officer within the Department of Emergency Services. Mr Ken Granger, a permanent employee within the Department of Emergency Services, was assigned the duties of Theme Coordinator for the twelve month period from January 1996. Later, Ms Alice Zamecka was appointed for a twelve month period (on a temporary basis) to assist the Theme Coordinator as the research officer.

In September 1996, Mr Granger resigned his position from the Department of Emergency Services.

Prior to departing, Mr Granger, prepared a very detailed and wide ranging progress report on

Theme coordination entitled “*Blueprint for Built Environment Information*”. This report was presented to QLIC at its meeting on the 31 October, 1996. The report contained 17 wide ranging recommendations and discussed other issues, many of which are outside the scope for establishment of the Built Environment Theme. However, these issues are relevant to whole of QLIS initiatives with many having impact outside the State Government arena. In his report, Mr Ken Granger states “*built environment information does not fit comfortably into the traditional view of land information, has only a limited State Government focus but is highly dependant upon other fundamental datasets in the QLIS environment for its successful and sustainable implementation.*” This is an important issue as many of the fundamental datasets are created from within the State Government.

In November 1996, Mr Graham McColm, Department of Natural Resources, was seconded to the Department of Emergency Services to complete the commitment to establish the coordination for the Built Environment Theme.

This report completes that commitment.

### 3.0 UPDATE on PROGRESS

Since the commencement of Built Environment Theme coordination early in 1996, many activities have been identified. Some have commenced, some are nearing completion while others have not yet begun. The target dates for the project were based on the research officer being appointed in early January 1996, however Ms Zamecka did not commence until 1 July 1996. Although the proposed target dates were not achieved, significant progress has been made to date.

QLIC, at its 31 October 1996 meeting, decided to proceed in the following manner with respect to Mr Granger's detailed progress report "*Blueprint for Built Environment Information*" and its seventeen recommendations:-

1. Note the "progress report" and the activities that remain to be undertaken;
2. Endorse recommendations 1, 16, 17;
3. Provide a copy of the report to the consultant undertaking the QLIS Benefits Study with particular regard to recommendations' 2, 3, 8, 10, and 13;
4. QLIC members were asked to provide comments on the report the Built Environment Theme coordinator to assist in refining it and its recommendations;
5. The Built Environment Theme coordinator to raise cross-theme issues at the next meeting of the Cross-Theme Coordinating Committee.

Progress on those items is as follows:-

- |          |   |
|----------|---|
| Action 1 | is completed;   |
| Action 2 | is completed;   |
| Action 3 | is completed - how the information has been used by the consultant will become evident with the presentation of the study by the consultant;  |
| Action 4 | no feedback has been received from QLIC members and it is unlikely that this will occur. This raises concerns and indeed risks for QLIS operations which are discussed further in Section 5;  |
| Action 5 | issues were presented to the cross theme coordinating committee meeting on 18 November 1996. It was agreed that all recommendations in Mr Granger's report are relevant to QLIS and require effective coordination to implement. No action plan has been formulated as yet through that forum. Theme Coordination issues are discussed in more detail in Section 4. |

Prior to his departure from the Department of Emergency Services, Mr Granger identified the

following issues as the main priorities for QLIS and the Built Environment Theme:

- The urgent need for education and awareness programs to generate an understanding by executives, managers and contractors to the benefits of collecting and managing spatial data from a corporate and integrated approach within and between organisations. The development and delivery of these need to be coordinated in conjunction with the QLIS Coordinator and industry associations such as AURISA;
- QLIS needs to play a leading role in developing and promoting a spatial information infrastructure in association with the national body ANZLIC. This effort will demonstrate how issues such as standards, metadata, communications technologies and clearinghouse facilities will benefit all users and providers;
- The access process, content and cost of the DCDB for a spatial reference for built environment information;
- The need for street address standards. Street Address is used as a locational reference for Built Environment information and an important link is that of the street address with the lotplan number of the spatial framework (DCDB). A lotplan/street address index is vital to enable relationships between many data sets and the cadastral framework.

These issues are important for stakeholders or users within the Built Environment Theme but require cross theme coordination and QLIS wide implementation.

Detailed information about progress with Theme activities is recorded in the following Appendices:-

- **Appendix 1** - summarises the progress to date for the agreed key targets for establishing the coordination of the Built Environment Theme;
- **Appendix 2** - summarises the progress to date for operational activities identified for the Built Environment Theme Coordinating Committee (BETCC);
- **Appendix 3** - presents a draft operational work plan. The work plan lists activities and actions with tentative completion dates. Finalisation of the work plan and appropriate time lines is dependant upon the likely re-focusing of QLIS as a result of the QLIS Benefits Study, the review of QLIC;
- **Appendix 4** - discusses all identified initiatives for the Theme with proposed actions. The activities have been grouped according to “like” activities to assist an understanding of the overall proposals for the Theme.

The role of the fulltime theme coordinator has now ceased. Operational activities will be continued by the Research Officer, Ms Alice Zamecka, until her temporary position expires at the end of June 1997.

I will continue to liaise with and assist Ms Zamecka from my normal position at the

Department of Natural Resources.

The period for Ms Zamecka may need to be extended beyond the end of June 1997. She was taken off-line from QLIS Theme activities for a short period to directly assist the Department of Emergency Service with analysis and data collection related to the Charleville Floods in February 1997. The case was of high demand at a critical time. Ms Zamecka had the necessary skills and had previously liaised with the Disaster Planning area within the Department. This work is aligned to disaster risk planning, a function which the DES are planning to enhance. Close links exist between disaster risk planning and its public safety focus with the underlying “whole of” aim for QLIS. The QLIS Benefits study has also recognised that an essential information product is Regional Emergency Response Planning and Analysis. This example demonstrates how a high priority for an agency, which has Government wide relationships (including information uses) can be supported by information infrastructure through QLIS. Whether Ms Zamecka’s temporary position will require extension can be determined as the end of June 1997 approaches.

Any on-going commitment to QLIS Theme coordination by the Department of Emergency Services beyond June 1997, will need to be renegotiated. The impacts of any likely refocusing of the management of QLIS as a result of the review of QLIC and the QLIS Benefits Study, will need to be resolved beforehand.

It is urgent therefore, that the structure and management of Themes and QLIS in general, be assessed with the view to better streamlining QLIS operations on a sustainable basis. Resourcing is a major issue. The QLIS Strategic Plan (which is soon to be developed) should reflect any new directions resulting from the QLIS Benefits Study and QLIC review. Time lines for activities, including those for QLIS Themes, should await this assessment period. The continuation of Theme Coordination in its present form may not be the most successful method for QLIS to achieve its desired outcomes. Section 4 discusses theme coordination aspects in more detail.

In the meantime, activities which have been commenced will be proceeded with and finalised.

## 4.0 Theme Coordination in Review

This Section discusses some experiences and thoughts about Theme Coordination. The aim is to provide information for QLIC to consider in association with the QLIS Benefits Study and QLIC Review, with respect to any refocusing of how QLIS and Theme Coordination may continue to operate.

*The Theme Coordination process has made substantial progress in identifying and strengthening bridges between organisations with a great array of operational interests and priorities. Long term and sustainable progress is, to a significant degree, dependent on progress being made in a concerted and combined effort by all QLIS Themes to advance fundamental issues like street addressing standards and locality boundaries. [Blueprint for Built Environment Information, Granger K, Sept 1996].*

While this statement still holds true, there are some concerns with the current model for Theme Coordination and with the progress of QLIS generally.

### 4.1 The Current Model of Theme Coordination

The concept for Theme coordination was that each Theme would focus on operational activities and datasets and set the operational framework which could be translated into tangible benefits for sponsors and other stakeholders.

To establish each Theme, QLIC funded a Theme Coordinator on a fulltime basis for a twelve month period, to develop the scope and operational activities for the Theme. Several line agencies have subsequently signed agreements with QLIC to become the leader of a particular Theme. As Theme Coordination was a new innovation, the fulltime Theme Coordinator was seen as a necessary resource to start the process. The scope and project plan for each Theme was developed by the Theme Coordinator and ratified through the Theme Coordinating Committee, independent of other Themes. This situation was unavoidable as agreements to establish Themes were implemented at different times. It was not possible to simultaneously commence each Theme due to the unavailability of staff and the time needed for subsequent funding and resourcing negotiations with the prospective Theme Coordinating agencies.

All QLIS Themes have now commenced activity and all are at varying levels of maturity.

As Mr Granger, the Theme Coordinator for the Built Environment Theme assigned by the Department of Emergency Services, has suggested, this process has been successful in some ways, particularly with the level of cooperation that has been generated. Theme Coordinating Committees also provide a forum for agencies not represented on QLIC but which have strong relationships with QLIS. The quality of people who are representing their agency on Theme Coordinating Committees is also of the highest order and their commitment to QLIS is significant to the whole initiative. There is general consensus among these people is that QLIS can deliver long term benefits and that it is a worthwhile initiative.

No uniform guidelines for Theme coordination were prepared prior to establishing Theme Coordinators. Development was left to the individual Theme Coordinators and their committees with the result that each Theme has taken different approaches. This has caused some confusion about the role for and outcomes to result from Themes, including:-

- confusion about the boundaries between theme activities resulting in duplication of effort when addressing common topics - eg user needs surveys were a common tool used to define requirements. However, surveys which contained very similar questions, often about the same datasets, were circulated from many Themes to the same people;
- inconsistent approaches to developing themes - eg the content, structure and intended uses for Theme Data models is different;
- a lack of a clear understanding of deliverables from Themes and what can be expected from QLIS - eg difficulty in defining tangible benefits and managing the expectations of sponsors and stakeholders for a quick payback;
- the quantity of discussion documents that are generated and circulated and sometimes the complexity of the issues raised.

A question which is being asked constantly is “what is in it for me?” For example, what benefits are there to a Local Government and why should it commit resources to QLIS? It has been stated that the tangible benefits of being involved in QLIS are not well enough articulated.

Currently, QLIS Theme Coordinating Committees have several people who represent their agency on more than one Theme Coordinating Committee. This requires increased time for these people to represent their agency on QLIS issues and promote the benefits of QLIS within their agency. Several agencies have several representatives on several Theme Coordinating Committees, resulting in the agency allocating substantial time to QLIS initiatives. The problem for QLIS is, that individual agencies are finding it increasingly difficult to allocate time for staff to perceived whole of Government or industry wide issues (like QLIS) as compared to focusing on internal core business activities.

Theme Coordination has been an evolutionary process. It was initially difficult to clearly specify how the Theme’s would collectively function and the level of cross-theme coordination that would be required. Whilst it was recognised that individual Themes would need to address some issues with varying degrees of importance, many issues impact across all Themes. The difficulty was trying to identify where responsibilities for these issues should lie. There is a need to assess progress with the current model of Theme Coordination, and endeavour to streamline any weaknesses identified with the experience gained so far.

## 4.2 Expectations for the Built Environment Theme and QLIS

The Theme is represented by many agencies outside the State Government which are not represented on QLIC. There are important relationships between these agencies and data providers in the State Government. A good example is the need for datasets which can be used as a spatial reference for built environment information (such as the DCDB or street centre lines).

The following expectations (and/or desires) for QLIS and the Built Environment Theme, were expressed from within the Theme Coordinating Committee:-

- to develop a mechanism to free up data interchange;
- to address the issues of non-commercial and commercial uses of data and the associated problems when accessing data from data suppliers (such as the Lead Agency for QLIS);
- to provide a better focus on what things need to be done to provide future directions with respect to information management and access to data;
- to assist the minimisation of duplication of effort and wasted resources for data creation and access to datasets.

It is interesting to compare these expectations with those identified for the Natural Resources Theme:-

*From a client survey:-*

- |        |   |  |
|--------|---|--|
| High   | - | standardised contracts, licensing and pricing for access to and acquisition of information;  |
|        | - | the continued availability of paper map products;  |
|        | - | an improved QLID containing user focused information and searching capabilities, QLID extended to allow on-line searching of current metadata; |
|        | - | ability to down-load datasets after searching metadata;  |
| Medium | - | consistent high quality data collection standards;   |
|        | - | more detailed metadata available;  |

*From the Natural Resources Theme Coordinating Committee:-*

Fundamental and High

- high quality data collection standards;
- more detailed metadata (including quality statements).

There is general agreement that the successful resolution of these issues will reduce the bottom line operating costs.

At the recent AURISA 96 conference which attracted several hundred delegates from around Australia and New Zealand, the following major issues for the management and coordination of spatial information were identified:-

- Custodianship;
- Access to data, and the agreements that are part of that process;
- Metadata;
- Data Quality;
- Other standards - such as data transfer standards, data dictionaries and technical standards to facilitate on-line operations between corporate systems.

These issues and priorities indicate a consistent thread and common expectations have emerged from QLIS participants and from within the leading nationally represented conference on land information management and infrastructure development. Current terminology trends are tending towards the use of “spatial” information as compared to “land” information.

In plain terminology then, the overall picture and general expectations across QLIS Themes, and indeed for spatial information issues throughout Australia and New Zealand, seems to be:

- ***how information are collected*** - the need for standardised approaches to data definition, capture and transfer;
- ***how information are be located*** - the need for standardised approaches to metadata to describe datasets and for data directories to search for suitable datasets;
- ***how information are accessed and used*** - the administrative processes to allow access to datasets, such as common data exchange procedures, data usage agreements, commercial and non-commercial data uses, custodianship etc.

### **4.3 A SWOT Analysis of Theme Coordination and QLIS**

In discussing the expectations for QLIS and the Built Environment Theme and to make some assessment of progress to date, a SWOT analysis of QLIS and Theme Coordination was completed by a small workgroup from within the Built Environment Theme Coordinating Committee. This group was formed to discuss these issues so they could be presented to QLIC at its March 5, 1997 meeting where the outcomes of the QLIS Benefits Study and QLIC Review and any likely changes to QLIC coordination would be discussed. It was not feasible at the time to call a full Theme Coordinating Committee meeting. The following strengths, weaknesses, opportunities and threats were identified.

#### ***Strengths***

- \* Increased cooperation between agencies;
- \* Themes provide a voice on QLIS activities for organisations which are not represented on QLIC;
- \* Many practical issues that were either not understood or realised have been raised - eg the need for and importance of standardised approaches to metadata specification to assist data accessibility and better internal data management at the agency level;
- \* General consensus and support for the concept of QLIS has been fostered.

#### ***Weaknesses***

- \* Not many issues raised have been solved;
- \* A lack of focus on tangible outcomes;
- \* Difficulty in defining tangible benefits and linking them to business processes;
- \* A lack of coordination between themes with resulting overlaps;
  - many people attending several coordinating Committees
  - many surveys and documents distributed containing overlapping issues
  - themes trying to individually do many QLIS wide initiatives;
- \* Themes are being developed individually with dissimilar methodologies - eg theme data models are being developed with inconsistent structures and levels of content with different ideas and intentions for use of the models;
- \* The quantity of documents to review;
- \* QLIS Strategies appear over ambitious;
- \* Lack of low level understanding of outcomes and benefits for participants.

#### ***Opportunities***

- \* QLIS could provide a means of gaining revenue whilst reducing operating costs;
- \* The National Competition Policy - through its framework to limit monopolies and possibly foster a business model approach. A potential brokerage model for QLIS was seen as an opportunity for data providers to make available datasets with a guarantee of a shared return of revenue generated and where data could become more available under business agreements;
- \* The delivery of working outcomes to demonstrate that can be presented to all parties to promote the benefits and improved business process that QLIS can facilitate.
- \* The ability to translate infrastructure into practical outcomes that can demonstrate “payback” to sponsors and stakeholders.

### *Threats*

- \* Who will use QLIS strategies anyway? There is no mandate for conformance - the conflicts of non-commercial and commercial data access procedures will continue;
- \* There is no regulatory framework to build the QLIS model;
- \* Difficulty in defining tangible benefits and linking them to business processes - eg. if the process cannot demonstrate benefit to the business needs or business drivers for stakeholders, then the implementation of the QLIS concept will be severely threatened by lack of commitment;
- \* QLIS actually achieving outcomes - the non delivery of working outcomes;
- \* The perceived delay in the ability to achieve a payback to sponsors and stakeholders and the associated difficulty in meeting their expectations of a payback;
- \* Corporatisation and privatisation;
- \* The National Competition Policy - as corporatisation and privatisation increases, more data providers and competitors will emerge. The notion of cooperative approaches to data collection, data uses and sharing will diminish with increased duplication and disparity in information content;
- \* Might affect revenue generation in agencies;
- \* Increasing demands to focus in internal core business;
- \* The changing view to public benefit ideals compared to operating costs and benefits.

All agencies, particularly those outside the State Government are finding increasing demands to reduce costs, generate revenue and become more efficient. This is causing problems to

allocate time to whole of Government / Industry wide initiatives such as QLIS. Concerns were raised that the commercial aspects to data access have, or are in the process of, overtaking the perceived non-commercial and public benefit situations. It was felt that this will increase as corporatisation and privatisation approaches expand.

It was generally agreed however, that a QLIS environment where data are created by one agency (the custodian) and made available to many users through consistently administered data access procedures, can reduce duplication of effort and generate savings to users and the community in general. For example, assets management is a major issue for Local Government. If a local government with millions of dollars (sometimes billions of dollars of assets) can save 1% of operating costs through better information management strategies, there are potentially huge savings to be realised. As well, decision makers will not be subjected to the increased risks of assessing disparate data when determining policy.

The underlying desire for QLIS, is to assist the lowering of the bottom line of operational costs and/or return dollars to the line agency through some form of revenue sharing. It was suggested that if QLIS adopted a business model approach through some form of information brokerage, better support for the development and successful implementation of QLIS was likely. The brokerage could operate in such a way, where agencies contribute to a QLIS “bucket” of information and have revenue generated through usage, shared and redistributed to the data providers.

#### **4.4 Thoughts from the Department of Emergency Services as a Theme Coordinator**

The DES agreed to establish the coordination process for the Built Environment Theme, as it has a large interest in the use of built environment information for public safety management purposes. The DES creates only a small number of datasets but needs many other datasets from a wide range of agencies such as State and Local Governments, private data brokers and public utility organisations.

The role of Theme Coordinator was funded by QLIC for a twelve month period from December, 1995 and provided a dedicated Coordinator and a Research Assistant (on a temporary basis) for that period. From the Department’s perspective the process has been established as agreed with QLIC. It has been successful in that issues have been raised, operational activities have been identified and progressed, and cooperation between agencies has been fostered. Many agencies represented on the Theme Coordinating Committee are outside the State Government and not represented on QLIC. They do not contribute funding to QLIC but are committing human resources and significant expertise to the QLIS initiative.

Some concerns about the nature and sustainability of Theme Coordination have arisen during the experience of the last 15 months. There appears to be a need to better establish outcomes whose benefits are more readily identified by stakeholders. Many issues raised through the Built Environment Theme to date, have QLIS wide implications and there appears to be overlapping responsibilities across Themes.

It is unclear where the responsibility lies and there appears to be an extent of duplication in addressing issues. Given these concerns it would seem appropriate to review the current model of Coordination. The QLIS Benefits Study appears to provide some excellent

information for reassessment, particularly with the listed “Information Products” which are aligned to identifiable responsibilities. It may be possible to now re-assess and streamline the current coordination model for QLIS.

Resourcing will be critical to the successful and sustainable implementation of QLIS. The current model of contributions to the QLIC funding pool and how staff are allocated and subsidised for liaison and coordination activities may also need to re-examined.

For example, within the DES, the Theme Coordinator and Research Assistant are located in the Information Services Unit within the Corporate Services Division. This Division is currently being corporatised into an internal Support Services Business Unit (SSBU). After June 1997, the SSBU will not have its own budget. It will operate on a fee for service basis with its Departmental clients who are tied to the SSBU until June 1998. This internal corporate focus, will make it difficult to justify contributions to QLIC initiatives unless DES Program Directors can be convinced there is benefit to them, and thereby agree to share QLIC contributions, be they financial or human.

If a suitable resourcing model can be developed, say where QLIC share the staffing component for a QLIS liaison person (on say a 80% internal and 20% QLIS basis), then it is felt that sustainable coordination for QLIS can be achieved. It is critical therefore that the continued benefits of being involved in QLIS be better articulated for all QLIS stakeholders.

QLIC need to assist agencies articulate these benefits so that commitment can be sustained.

#### **4.5 Sustainable Theme Coordination**

The following options are listed for discussion as alternatives to the possible future for Theme Coordination in QLIS as a result of the experiences gained to date.

##### **4.5.1 *Option One - Continue with the Current Model of Theme Coordination***

The benefit to the line agency, which is the Theme Coordinator, is that it can direct and influence the Theme activities whilst ensuring consistency with the overall QLIS framework.

The resourcing consideration is whether Theme Coordination requires a fulltime or a part-time position to administer the on-going activities for each QLIS Theme.

The risks for QLIS in having several fulltime Theme Coordinators are:-

- a large QLIS investment in wages with potential reduction in funding to deliver outcomes (ie an investment in bureaucracy);
- continued confusion on what and how Themes could or should deliver.

QLIS Coordination activities could also be performed and funded on a part-time basis (say 20%) of a fulltime position at the appropriate level and allow the coordinator to dedicated the majority of effort to core business for the agency.

The risks for QLIS in having several partly funded Theme Coordinators are:-

- completion of QLIS initiatives could be delayed further and detract from the perceived benefits of QLIS generally;
- continued confusion on what and how Themes could or should deliver.

#### **4.4.2 Option Two - Focus Coordination on “Like” Activities**

A second model might be to focus QLIS coordination and resourcing on outcomes that are of a “like nature” - such as street address standards or access to and use of foundation datasets to be used as a spatial reference. Appendix 4 contains details of proposed Built Environment Theme activities grouped in such a manner.

Individual project teams, that have representation from both data users and data providers, could be constituted from stakeholder agencies and coordinated on a part-time basis. Resourcing is again a major consideration. Agencies might be better placed to release staff for short term, funded ‘secondments’ to QLIS projects that will deliver QLIS outcomes of benefit to their organisation. The merit in this approach is that many QLIS initiatives, which are currently being addressed at varying levels by many Themes, could deliver outcomes more quickly and according to better defined priorities with reduced overlaps in effort.

Funding to coordinate these activities could be implemented in selected line agencies (like a Theme Coordinator) but where a different focus to that of the current Theme Coordinators is employed. A percentage of a fulltime person (say 20%) would seem appropriate for these liaison activities and allow the coordinator/liaison person to allocate a majority of time to agency core business. This position could be subsidised by QLIC for the percentage amount or agencies may determine to contribute this amount as commitment to QLIC.

#### **4.4.3 Option Three - Focus Coordination to “Information Products”**

The “Information Products” identified in the QLIS benefits study, reflect services which are required by the community in Queensland. Some examples of information products are, regional emergency response planning and analysis, sporting and recreational facilities location analysis, regional preferred development areas analysis, land use policy analysis. These types of information products are constructed around business needs of a variety of organisations. Generally one agency has responsibility to deliver a service and thereby create or compile an information product.

Maybe by aligning QLIS outcomes to these Information Products as identified in the QLIS Benefits Study, the benefits of establishing the QLIS infrastructure will be better understood. How the underlying components of QLIS (such as data definition, data specification standards and data access procedures) can support and enhance the business drivers for organisations, may be more easily identified and articulated. The responsibility for coordination of QLIS initiatives could potentially lie with the agency whose responsibility it is to deliver the service or create the “information product”. The need for QLIS infra-

structural components could be identified at the information product level and the benefits more easily related to individual agency core business. Common infrastructure components and priorities could be identified when many information products are similarly assessed. A new type of Theme Coordination or QLIS coordination model could emerge.

In all options, a central coordinating group would be necessary to drive QLIS initiatives in conjunction with the coordination focus groups. This central group should continue to operate within the Department of Natural Resources, while that agency continues to be the lead agency for QLIS.

#### **4.6 Major Issues for Theme Coordination and QLIS**

Theme coordination for QLIS has been evolutionary and lessons have been learnt from the experience to date. Impetus for a change in focus seems to be coming from the review of QLIC and the QLIS Benefits Study. As the experiences of establishing Themes is now also available, it would seem a very opportune time to review the whole process.

As corporatisation and privatisation approaches increase, executives are requiring increased focuses on internal core business. The bottom line is changing, staff reductions are a reality and there are increasing pressures to reduce costs and generate revenue. The problem for QLIS is to justify and resource these “whole of ” issues so that the desired outcomes for QLIS ( better access to data, improved quality and understanding of data to support business objectives) can be obtained within this increasing corporatised environment. It is important therefore to link the benefits of developing the information infrastructure of QLIS to business drivers in stakeholder organisations. If this cannot be achieved, commitment to QLIS will not be sustained and QLIS will fail.

An appropriate consultation and resourcing model needs to be developed to ensure sustainability of QLIS development and implementation. Resourcing is critical. This could involve a change to the process used by Treasury to fund agencies to collect and manage datasets, particularly those which are foundation datasets for other business requirements. Sustainable Theme coordination, should be addressed with the QLIC Review, outcomes from the QLIS Benefits Study and the experiences of establishing QLIS Themes.

A new focus with respect to resourcing and managing QLIS initiatives (and Themes) may emerge and maybe it needs to.

## **5.0 SUMMARY and RECOMMENDATIONS**

The establishment phase of the Built Environment Theme, as agreed between the Department of Emergency Services and QLIC, has been completed and the role of the fulltime Theme Coordinator has now ceased.

The process has been successful in fostering cooperation in QLIS, particularly from agencies which are not represented on QLIC. Many issues, which were either not really understood or previously realised, have also been raised. There is general consensus that QLIS is a worthwhile initiative which can deliver benefits to all stakeholders.

The Theme Coordinating Committee has been formed and a number of operational activities identified and commenced. The activities listed in Appendix 3 will be progressed by the temporary research assistant in the DES, Ms Alice Zamecka, until her QLIC funded contract expires at the end of June 1997. During this period, liaison and management support will be provided from the QLIS group within the Department of Natural Resources.

Any subsequent commitment to QLIS by the DES will need to be renegotiated. The likely impact of recent QLIC initiatives - QLIS Benefits Study and QLIC Review will be central to negotiations. The DES however supports the principle of developing a land information infrastructure for Queensland through QLIS.

As a result of the QLIS Benefits Study, the review of QLIC and the issues raised in this report, the nature of Theme coordination and QLIS coordination generally may need to change. QLIC will need to provide policy and direction on the future of Theme coordination and determine whether the current model of coordination of QLIS is still appropriate. Sustainability of the coordination model for QLIS is a major consideration, where effective resourcing will be crucial to successful implementation of QLIS initiatives.

The new QLIS Strategic Plan, which is currently being formed, should reflect any change in focus for QLIS coordination and be developed after suitable assessment of recent QLIC consultancy initiatives.

The increase in privatisation and corporatisation approaches in agencies, with resulting pressures to concentrate on internal business, is a critical issue for QLIS and its "whole of" focus and benefits. QLIC need to better articulate the benefits of QLIS - to the Government for funding and resourcing considerations, and to individual agencies to assist them to articulate benefits of QLIS to them. If this can be achieved, firm commitment to the QLIS strategy can be fostered and enhanced.

In the meantime, it is important not to stall progress. Theme activities which have commenced and been identified as priorities, should be progressed and completed. Finalisation of deadlines for these activities should be delayed until after assessment of the new QLIS Strategic Plan. No new activities will be commenced until after resolution of the QLIS Strategic Plan.

With these thoughts in mind, the following recommendations are put to the Queensland Land

Information Council for consideration and endorsement.

**Recommendation No 1**

The issues raised in this report be considered in conjunction with outcomes from the QLIS Benefits Study and QLIC Review with respect to any likely changes to coordination and resourcing for QLIS.

**Recommendation No 2**

The current process for Theme Coordination be re-assessed with respect to the outcomes of Recommendation No1 and subsequently, the direction of all Themes be re-aligned as appropriate.

**Recommendation No 3**

The QLIS Strategic Plan be developed to reflect any refocusing of the management of QLIS after suitable assessment of the impacts from QLIS Benefits Study, QLIC Review and the issues raised in this report.

**Recommendation No 4**

The Theme activities, as identified in Appendix 3, be progressed and completed. Finalisation of deadlines be delayed until after completion of the new QLIS Strategic Plan.

## APPENDIX 1

### Summary of Key Targets to Establish Theme Coordination

The key targets accepted by QLIC for the establishment of coordination for the Built Environment Theme and their status are listed in Table No 1 below:-

Table 1

Key Target	Status	Comments
Establish theme coordination committee and stage a workshop of stakeholders (Feb 96)	completed (Feb 96)	committee met five times during 1996
Complete an audit of public sector Built Environment (BE) information and client needs analysis (Mar 96)	audit completed (Mar 96) <i>user needs analysis not done</i>	- the level of user needs analysis will be reassessed after completion of QLIS/ICDISG user survey
Develop a draft data model and data dictionary for Community Features (May 96)	final model completed (Feb 97)	Promotion and implementation program is required
Complete a pilot project of BE information management for Gold Coast, Logan, Brisbane, Ipswich and Cairns LG's. (Jun 96)	Cairns project underway as part of AGSO CITIES project (by Mr K Granger)	the plan is to test the data model/data dictionary and processes
Expand pilot project for priority elements for all of SE Qld (Dec 96) and extend to provincial centres (Jun 97)	Pilot project for SEQld in progress at the Department of Emergency Services	-Testing of data model completed; - Draft Report of testing to be developed by end of March 1997; - Testing of data model&data dictionary is based on needs of DES, where the priority elements for emergency management have been identified.
Report to QLIC with operational plan for theme coordination (Dec 96)	Progress Report presented to QLIC (Oct 96)  Final report finalised (Mar 97)  Operational plan not finalised	- progress report contained 17 recommendations - some accepted, some noted for future and some deferred;  - theme coordination needs re-assessment in-line with QLIS reviews;  - Operational plan to await finalisation of new QLIS Strategic Plan

Note that the initially planned target dates could not be achieved as the research assistant did not commence work until 1st July 1996, six months after the planned commencement.

## APPENDIX 2

### Summary of Progress for the Built Environment Theme Coordinating Committee ( BETCC)

The forming of the BETCC and defining its terms of reference was achieved early in 1996. BETCC met five times during 1996. Tasks identified for BETCC under its terms of reference are listed in Table Two below.

TABLE 2

Task	Status	Comments
Identify Built Environment Theme data elements for the QLIS Foundation Information Standard	completed	- user needs to be identified; - links with the “information products” from QLIS Benefits Study
Negotiate and recommend information custodianship arrangements	- not finalised; - data access agreements were initiated and tested during trialing of the Community Features data Model.	- arrangements should be consistent for all of QLIS; - A report on data access issues during testing will be developed by May 1997; - links to user needs analysis and the QLIS agreements currently being negotiated with Local Government.
Coordinate management of integration of Built Environment Theme data into wider QLIS concept	issues discussed at regular BETCC meetings	other projects proposed to be developed through BETCC (or its successor)
Development and recommendation of standards for Built Environment Theme	several standards identified - street address, locality boundaries, transfer of ‘as constructed’ information...etc.	An ongoing activity
Provide input to QLIS strategic plan	commenced - this report and its recommendations	An ongoing activity
Facilitate consultation between Built Environment Theme agencies	commenced through BETCC	An ongoing activity
Support the interests of all users of Built Environment information	commenced through BETCC	An ongoing activity

## APPENDIX 3

### Interim Work plan

Tentative end of month completion dates are listed

- Continue work on projects which have commenced:-
  - Finalise the development of the Community Features Data Model - *[Mar 97]*;
  - Support the completion and implementation of the Moreton Model and associated Data Dictionaries for public utilities information - forward the data dictionaries to Standards Australia for use in national standards development - *[Mar 97]*;
  - Support the finalisation and assessment of the User Needs Survey for “As Constructed” public utilities information being conducted in association with the industry group, Information Collection and Data Interchange Standardisation Group (ICDISG) - *[Mar 97]*;
  - Finalise the trial implementation of the Community Features Data Model in the Department of Emergency Services, document outcomes and distribute - *[Apr 97]*;
- Assess the outcome of the ICIDISG/QLIS user needs survey. Determine any appropriate extension of the survey for community features information - *[Apr 97]*;
- Develop a process to implement theme projects and activities through small groups of BETCC members who will focus on activities of a like nature (as discussed in Appendix 4). This is dependant upon the outcomes of any re-focusing of QLIS coordination - *[Apr 97]*.
- Promote and implement the Community Features Data Model - *[May 97]*;
- Initiate a consultancy to assess the Community Features Data Model and Data Dictionary for conformity to the national standard for spatial data transfer, SDTS - *[May 97]*;
- Develop an issues paper to QLIC on data access resulting from the experience of collecting data for the trial implementation of the community features data model, the CITIES project by AGSO and liaisons within the Department of Emergency Services - *[May 97]*;

- Liaise within the Department of Emergency Services to trial data access processes which can be extended throughout QLIS. Within the Queensland State Government the QLIS Non-Commercial Agreement will be used as the model for appropriate data access - commercial agreements, such as the supply of digital street centre lines will also be monitored - *[Jun 97]*;
- Continue liaison with Dept Public Works and Housing on the Call Before You Dig Service including representation on the steering committee until implementation of the service - *[Jun 97]*;
- Continue liaison with CITIES project by the Australian Geological Survey Organisation (AGSO) and assist promotion of outcomes from its data collection and standardisation processes - *[on-going]*;
- Continue liaison with providers of Built Environment Information - *[on-going]*;
- Continue liaison with QLIC and the QLIS Coordinator to progress issues which are important to the Built Environment Theme to ensure effective coordination of cross theme initiatives such as Street Addressing standards - *[on-going]*.

# APPENDIX 4

## Discussion of all Proposed Operational Activities

### 4.0 Grouping of Common Activities

All activities identified in the theme establishment process have been grouped into “like” activities under simplified and common headings. Courses of action for QLIS and the Theme are proposed. Time lines are not listed and will not be finalised until after the QLIS Strategic Plan is reviewed subsequent to identifying impacts of the QLIS Benefits Study, the review of QLIC and subsequent QLIS Cabinet submission.

#### 4.1 *Data Model and Data Dictionary Developments*

- 4.1.1 Complete the Community Features data model and data dictionary as planned;
- 4.1.2 Initiate a consultancy to assess the document to ensure compatibility with national standards (such as SDTS);
- 4.1.3 Ensure cross-theme coordination so that all QLIS data models and data dictionaries are developed with consistent structures and content;
- 4.1.4 Continue liaison with the Moreton Model Development Group to finalise the “as constructed” data models and data dictionaries and facilitate their progression to the appropriate group within Standards Australia;

#### 4.2 *User Needs Analysis*

- 4.2.1 Initiate a user needs analysis for public sector built environment information (including community features) to supplement the completed audit of systems. This survey will need to await the completion of the ICDISG survey (due Dec 96) and the outcomes of the QLIS Benefits Study (due Feb 97) to ensure information requests are not duplicated;
- 4.2.2 From the user needs analysis, develop a map (or data flow diagram) of the information flows from *data creators/collectors* to *data managers/custodians* to *users* to gain a better understanding of user needs and identifying custodianship issues etc). This may be particularly important given that many stakeholders of built environment information are outside the State Government arena. The potential impacts of corporatisation/privatisation on data access, data sharing and non-commercial uses is a significant related issue;

### **4.3 *Pilot Projects***

- 4.3.1 Release responsibility for the Cairns pilot project to the AGSO CITIES project (Mr Ken Granger) and ensure the relationship with QLIS is maintained through Mr Granger's continued membership of BETCC;
- 4.3.2 Investigate the potential for the workshops proposed for the Cairns/CITIES project to be part of a wider Built Environment Theme education program;
- 4.3.3 Liaise with Mr Granger to ensure the "clearinghouse" aspects of the CITIES project consider other QLIS initiatives - such as the QLID development, the ANZLIC metadata standard, the metadata/Internet browsing and data downloading project under the management of the Department of Environment and Heritage, Mr Steve Jones as well as the proposed QLIS technology architecture;
- 4.3.4 Investigate the extension of the "clearinghouse" model for other Built Environment Information including the proposed New Land Developments Register. Ensure that any extension of this model be similarly consistent with the QLIS and ANZLIC initiatives for a Spatial Data Infrastructure.
- 4.3.5 Identify what the priority elements are built environment information for testing within the proposed user needs analysis;
- 4.3.6 Monitor and assess the pilot project based on the Department of Emergency Services/CAD system to test the community features data model, data dictionary and data collection processes.

### **4.4 *Street Address Standards***

- 4.4.1 Gather updated information on status of several initiatives - Land Admin Theme street address initiative, rural address standard implementation, lotplan street address development in conjunction with the local authorities/valuations data validation project, Telstra's Address Guide (TAG), AS4212 (address transfer standard);
- 4.4.2 Coordinate the collection of needs for and implementation of standard addressing and provide them to the Land Administration Theme;
- 4.4.3 Coordinate the collection of needs for and implementation of standard locality boundaries for Queensland and provide them to the Land Administration Theme.

#### **4.5 *General Standards Development***

- 4.5.1 Continue liaison and coordinate input into the development of appropriate standards and if necessary, support their input into Standards Australia. (Eg. Digital lodgement process such as Moreton Model, Caloundra Model, the proposed public utility and spatial object standards (DR 95480/1);
- 4.5.2 Provide appropriate assistance, comment and advice into the ISO/TC211 standards development work groups being coordinated through Standards Australia.

#### **4.6 *Custodianship and Data Access Processes***

- 4.6.1 Liaise with the QLIS coordinator to identify and develop appropriate QLIS custodianship agreements that consider the needs of users and managers of built environment information. The current discussions between QLIS and Local Authorities is part of this process;
- 4.6.2 Identify the potential implications of corporatisation and privatisation of utility assets management. If appropriate within the like new operating model for QLIC, develop a short issues paper for presentation to QLIC where the potential for a QLIC consultancy to investigate these issues be considered.

#### **4.7 *The DCDB - as the prime spatial reference framework for Built Environment Information***

- 4.7.1 Identify concise user needs for the DCDB for built environment theme, which may be extensions of DNR's internal needs eg:-
  - unique feature identifiers;
  - additional content;
  - additional products from the DCDB (eg lotplan / street address index).
- 4.7.2 Identify strategies for the access to, content and cost of the DCDB for a spatial reference for BE information so that the general data needs of the data manager/custodian (DNR) is balanced with the value added/enhanced needs of external users - how to collaborate, fund enhancements etc - a user driven perspective rather than a supply driven attitude;
- 4.7.3 Identify concise needs for unique feature identifiers for built environment information. Refer these needs to the Queensland representative (Dr Russell Priebbenow, DNR) on the national working party for Unique Feature Identification;
- 4.7.4 Identify any potential strategy to assist agencies manage the conflict between

coordinate based methodology v relativity to a spatial reference such as the DCDB:-

- given the accuracy and content limitations of the DCDB;
- users want updates only, be they lines, polygons and attributes or attributes only;
- ensure visual presentation of integrated data is accurate.

#### **4.8 *Call Before You Dig Service***

- 4.8.1 Assist QLIC member agencies develop a project to seek QLIC funding approval to participate in the development of the Queensland system;
- 4.8.2 Liaise with sponsor (Department of Public Works and Housing) to ensure the system is developed consistent with the QLIS philosophy and considers the QLIS Technology Architecture, metadata standards etc;

#### **4.9 *Education and Awareness Programs***

- 4.9.1 Liaise with the QLIS Coordinator to ensure all programs are developed and delivered in a coordinated manner;
- 4.9.2 Identify the content of a potential State wide program aimed at Local Government Authorities, Utility Providers, their surveyors and engineers, specific to built environment information collection, transfer and use;
- 4.9.3 Provide assistance to develop and if appropriate assist the delivery of education programs on the collection and use of metadata and metadata standards;
- 4.9.4 Contribute, as is necessary, to the next QLIS forum (which is planned for first or second quarter of 1997).

It has been discussed at Theme Coordinating Committee level to manage these tasks by smaller focus groups. The intention for these focus groups is to operate informally as a reference group.

The groups have not been formally constituted and have not yet commenced any operational level activities.

**Data Model and Data Dictionary**

G McColm  
A Zamecka  
G McMahan

**Education & Awareness**

G McColm  
W Fry  
K Granger  
G McMahan

**User Needs Analyses**

G McColm  
A Zamecka  
B Pow  
G McMahan

**DCDB**

R Priebbenow  
K Granger  
B Peters  
H Unkles

**Pilot Projects (Community Features, CITIES, Call Before You Dig, New Land Developments)**

A Zamecka	B Peters
K Granger	T Althaus
B Thompson	J Houston
M Blair	G McColm

**Street Addressing Issues and Standards**

A Zamecka  
K Granger  
W Fry  
D Paice  
G Erickson

**Custodianship and Data Access**

B Peters  
B Pow  
A Zamecka

# APPENDIX 5

## Budget Summary

Funding has been allocated by QLIC from its cross agency fund and will be used over two financial years, 1995/96 and 1996/97.

TOTAL BUDGET \$ 000 000

QLIC Funding Allocation \$ 000 000  
Dept Emergency Services Funding Allocation \$ 00 000

Expended to end of January 1997 \$ 00 000

Committed to end of June 1997 \$ 00 000

Earmarked for expenditure \$ 00 000  
- consultancies \$ 00 000  
- education and awareness \$ 00 000

Possible Balance \$ 00 000