Westfield (New Zealand) Limited

CONSTRUCTION MANAGEMENT PLAN

WESTFIELD SHOPPINGTOWN QUEENSGATE REDEVELOPMENT

Revised Dec. 2002

Table of Contents

1.1 Preamble

1.2 Introduction

1.3 Schedule of Proposed Stages of Construction

1.4 Construction / Demolition / Excavation Process & Procedures

1.5 Construction Traffic Management

1.6 Pedestrian Routes & Crossings

1.7 Public & Community Relations

1.8 Risk Management

1.9 Fire Risk

1.10 Site Safety

Appendices

A Locality Plan

B Site Plan – Construction Zones

C Construction Programme

D Construction Traffic Management Report

E Noise Report

F Fire Reports

G Site Specific Environmental Health & Safety Management Plan

1.1 - Preamble

Resource Consent has been granted for the proposed redevelopment of Westfield Shoppingtown Queensgate by Hutt City Council, subject to a number of imposed conditions. This document examines the complexities associated with the excavation; demolition and building activities that constitute the overall Westfield Shoppingtown Queensgate redevelopment.

The redevelopment and expansion of Westfield Shoppingtown Queensgate, made up of existing and new space, incorporates 40,987m^2 of retail entertainment and associated space, 6,387^2 of mall space, and 5,028m^2 of amenity space with the north side of the site consisting of a three level parking building. This, together with an area of parking dedicated to the ground floor supermarket with access from Knights Road, and the retention of part of the existing Farmers rooftop car park, will provide approximately 2000 on-site car parks.

The Shoppingtown redevelopment and extension is a large and integrated development built around a two level central pedestrian mall area. While parts of the site will remain unchanged, much of the remaining site will be transformed from open space and car parking at ground level, to building development with a general height of approximately two storeys over most of the site. The car parking area along the Waterloo Road frontage has three and a half levels of car parking including roof and ground level car parking, within the height of approximately a typical two story commercial building.

A range of materials will be used as building cladding, with particular attention to the car parking area cladding. It is intended to introduce local art and design to avoid potential blandness and enliven the appearance of this area.

The upper parts of the development will be seen from nearby western hills. There will be variation in height and texture over the whole area with an area of roof over the supermarket, discount department store and the entire length of the new mall. There will be gabled light wells into the mall area of the new Shopping Centre building. Roof top car parking will continue in its present location on the southern part of the site, and will be extended to include the whole of the north of the site. This will in part be visually shielded by the vertical extension of the parking building cladding, and by poles, flags and other distractions.

This submission addresses the likely impacts the proposed construction process will have on the following and provides details on how any adverse effects will be minimised.

- Construction Staging
- Construction Zones
- Construction, Demolition & Excavation Methodology
- Public and Construction Vehicle Access Points
- Pedestrian Routes & Crossings
- Public & Community Relations
- Risk Management

Specific Requirements Addressed in the Construction Management Plan.

The Construction Management Plan specifically addresses the following processes as summarised for clarity below. Specific clauses are quoted within the body of this submission where an imposed condition has been addressed.

- Construction zones:
- A schedule of work:
- Bulk excavation and demolition:
- Appointment by the applicant of a community liaison and the establishment of a complaints register:
- Site ingress and egress:
- Public transport operations, both buses and taxis: bus stops & taxi stands:
- Safe pedestrian movement:
- Construction noise assessment prepared by a qualified consultant engaged by the applicant:
- Protecting environmental amenity of adjoining residential localities and properties:
- Measures to ensure there is not a risk of asbestos contamination of adjoining public or residential areas:
- Measures to ensure there is proper control of sediments resulting from building activity:
- Measures to ensure there is proper control of dust resulting from building activity:
- Dilapidation Report:

This Construction Management Plan and all associated documentation will be applicable to the site during all times when construction works are being undertaken. The hours of construction operation may extend outside normal working hours

Works exceeding any local authority rules or Resources Consent conditions may be undertaken subject to making an application and subsequent approval. The Council will consider an application for dispensation in specific situations as follows. Where the work to be undertaken is shown to have a minimal effect on local amenity and where the nature of the construction necessitates that the work be undertaken in the manner specified. If substantial benefits to the project can be achieved by granting the dispensation and this is shown to offer a significant reduction in the overall programme, and therefore limits the

term of impact of the project on the neighbouring environment and business amenity, then this option would be seriously considered.

The redevelopment of the Westfield Shoppingtown Queensgate will cause some inconvenience to the local community during the construction delivery process. Due cognisance has been made to the need to limit the impact on local amenity as much as possible. This has been balanced with the recognition that by building the development as expediously as possible, a substantial degree of the disturbance can be eliminated, which would otherwise be felt by the local community if the construction process were to be prolonged.

1.2 - Introduction

The conditions imposed in the approved Resource Consent seek clarification of construction processes and procedures in the redevelopment of Westfield Shoppingtown Queensgate. This Management Plan addresses the following key issues throughout the construction period: pedestrian access and safety; construction and general traffic management; risk management including construction noise mitigation and construction dust control and construction site safety.

The Management Plan reflects Westfield's view of the management of the construction works, which will commence in the second quarter of 2003. In the preparation of the plan, Westfield has blended extensive examination of the construction works associated with the redevelopment of Westfield Shoppingtown Queensgate with its considerable experience in the construction management of major retail projects. The extent of the development site within the context of Hutt City Central Business / Retail Area is illustrated on the locality and site plans contained within Appendices A and B.

Westfield has commissioned consultants, Traffic Design Group and Hegley Acoustic Consultants to advise on traffic and noise management respectively. Their reports are contained within Appendices D & E of this Construction Management Plan and their advice is cross-referenced throughout the plan.

The management plan examines the complexities of the construction delivery process and procedures for demolition, excavation and construction activities for the development area within the pedestrian, traffic and transport constraints of the Hutt City environment. Major construction activities have been identified for each component and have been further arranged into strategic construction phases. Examination of the construction programme suggests the project will span a period of some 18 months with varying degrees of construction and demolition activity over this period.

A plan detailing site zones and a construction programme are provided within Appendices B and C to illustrate the location and probable timing of each stage of the works.

Westfield will orchestrate a public and community relations programme aimed to advise the general public, school, commuters, retail tenants and businesses in Hutt City, of the status of the development and of the ongoing sequence of construction works. It will typically include: presentations to community and local business groups, circulation of newsletters in the Hutt City Council, media releases in local newspapers.

Westfield have engaged Maltby & Partners Limited to compile a dilapidation report covering such items as the surrounding roading and footpath network, external facades of surrounding buildings, traffic signs, traffic lights, bus stops, and also, to a lesser degree, the existing centre. A copy of this report will be forwarded to the Hutt City Council prior to construction works commencing.

In summary, the Construction Management Plan is submitted for consultation with Hutt City Council. The key elements of the plan are typical of a major development in a busy commercial area. The plan presents the basis of delivery of the development in its entirety over the estimated 18-month construction period scheduled to commence in the second quarter of 2003.

1.3 – Schedule of Proposed Stages of Construction

The following table is to be read inconjuction with Appendix B that details the construction zones.

TABLE 1
Schedule of Proposed Stages of Construction.

DESCRIPTION	SUMMARY OF WORKS	COMMENTS
STAGE 1	Day 1 to Month 6	
New Vehicular Ramp Zone B	1) Construction of new vehicular ramp in Zone B near the existing Foodtown Loading dock. Access from Waterloo Rd to existing first level carpark deck.	Provides vehicular access to enable demolition of existing vehicular ramp adjacent existing Hutt City Markets (corner Bloomfield Tce & Knights Rd) - Zone J
Zone B	1) Demolition of existing car dealer ship buildings on Waterloo Rd	To enable construction of Zone B.
	2) Construction of one level carpark (2 levels including the ground floor	Approx.307 carpark spaces
Zone A	1) Demolition of existing buildings on Queens Dr & Queensgate Rd	To enable construction of Zone A
	2) Construction of two level carpark (3 levels including ground floor)	Approx. 275 carpark spaces
	3) Construction of 8 permanent shops & 15 temp. shops	To enable tenants in the existing mall to relocate while the new mall is constructed
Zone E	1) Upgrade of the existing centre including foodcourt, new shop configuration, new mall ceilings & floor finishes	To match in with the rest of the re-development
STAGE 2	Starts Month 3	
Zone J	1) Demolition of one level carpark structure including existing vehicular ramp	To enable construction of new 2 level retail structure
	2) Demolition of existing "Wilsons" carpark on corner Bloomfield Tce and Knights Rd	To enable construction of new 2 level retail structure
	3) Demolition of existing Hutt City Market Building	To enable construction of new 2 level retail structure
	4) Demolition of existing Hutt Valley Health building	To enable construction of new 2 level retail structure
	5) Construction of two level retail structure	Foodtown (level 1), The Warehouse (level 2).
	6) Construction of ground floor carpark adjacent to two level retail structure	Approx. 107 Carpark spaces
Zone B	1) Vehicular ramp open at Month 3. New carpark opens at Month 6	Approx. 307 Carpark spaces. New access to existing roof top carpark open.

Table 1 continued

DESCRIPTION	SUMMARY OF WORKS	COMMENTS
Stage 2 continued		
Zone A	1) New 3 level carpark opens at Month 6 2) 8 Permanent shops & 15 temp. shops open at Month 6	Approx. 275 carpark spaces Tenants in existing centre relocated enabling the rest of the re-development to proceed
Zone E	1) Existing Centre up-grade works complete at Month 6	Up-graded Foodcourt, new mall ceiling & floor finishes
STAGE 3	Starts Month 6	
Zone J	1) Construction & fitout of two level retail structure continues	Foodtown (level 1), The Warehouse (level 2)
Zone F & G	1) This section of the existing mall ceases trading 2) Demolish the existing centre (Valley Mall) from the Western end of the existing Farmers building to the Western end of the existing Foodtown building	Tenants re-located to up-graded centre (Zone E) & new shops in Zone A To enable construction of a 2 level Retail Mall
	3) Commence construction of two level retail mall from the existing up-graded centre to Bloomfield Tce.	Approx. 105 retail shops
Zone H	1) Demolish area between the existing Farmers building & the existing Westfield Office Tower	To enable the construction of the Farmers extension
	2) Demolish the up ramp on the south & west sides of the existing Farmers building	To enable the construction of the Farmers extension
	3) Commence construction of the two level Farmers extension between the existing Farmers building & the existing Westfield Tower building	Approx. 1900sq.m of extra retail area for Farmers
	4) Farmers commence up-grade of their existing store	To match in with the rest of the re-development
STAGE 4	Starts month 12	
Zone J	1) Foodtown trading in new location (Level 1)	Approx. 3941 sq.m retail area & 107 carpark spaces
	2) Ware house lessors fitout out works commences	Approx. 6100 sq.m of retail area
Zone F	1) Fitout & finishes in progress to new two level mall	Approx. 38 retail shops
Zone G	1) Completion of structure. Begin finishes & fitout works to the two level mall	Approx.67 retail shops

Table 1 continued

DESCRIPTION	SUMMARY OF WORKS	COMMENTS
Stage 4 continued		
Zone H	1) Farmers extension complete & ready to trade 2) Up-grade of the existing Farmers store continues	Approx. 1900sq.m of retail space Approx. 6577sq.m of retail area being up-graded
Zones C & D	1) Demolish the existing Food town building 2) Demolish the existing Toy world/Avanti building 3) Commence construction of two level carpark (3 levels including ground floor) from Zones B, F & G to Waterloo Rd & Bloomfield Tce.	To enable the construction of Zones B & C To enable the construction of Zones B & C Approx. 1114 carpark spaces
STAGE 5	Month 15 to Month 18	
Zone J	1) Ware house lessor fitout works continuing **(Works complete & trading at Month 18)**	Approx. 6100sq.m of retail area
Zone F	1) New two level retail mall complete and trading	Approx.38 retail shops
Zone G	1) Finishes and fitout works continuing to two level mall **(Works complete & trading at Month 18)**	Staged opening. Approx. 37 shops trading at Month 16.5. Approx. 30 shops trading at Month 18
Zone H	1) Farmers up-grade complete & all of store is trading	Total area of Farmers approx.8477sq.m
Zone C	1) Approx. one third of the three level carpark to open with the two level Zone F shops 2) Balance of carpark construction continues with completion at Month 18	Approx. 200 carpark spaces Approx. 401 carpark spaces
Zone D	1) Carpark construction continues **(Carpark complete & operational at Month 18)**	Approx. 513 carpark spaces
Zone A	1) Remove the temp shops as retailers move into new shops as mall works are completed 2) Complete asphalt & line marking where temp shops removed	By Month 18 By Month 18

Table 1 continued

DESCRIPTION	SUMMARY OF WORKS	COMMENTS
STAGE 6		
Zone A	1) Carpark complete & open (refer stages 1 & 2) 2) 8 permanent & 15 temp shops complete & trading (refer stages 1 & 2) 3) Temp shops removed (refer stage 5)	
Zone B	1) New ramp operational (refer stages 1 & 2) 2) Carpark complete & open (refer stages 1 & 2)	
Zone C	1) Carpark complete & open (refer stages 4 & 5)	
Zone D	1) Carpark complete & open (refer stages 4 & 5)	
Zone E	1) Existing mall refurbishment complete including food court (refer stages 1 & 2)	
Zone F	1) New two level retail mall complete & trading (refer stages 3,4 & 5)	
Zone G	1) New two level retail mall complete & trading (refer stages 3,4 & 5)	
Zone H	1) Farmers extension & existing store upgrade complete (refer stages 3,4 & 5)	
Zone J	1) New Food town, Food town carpark & Warehouse complete (refer stages 2,3,4 & 5)	

1.4 – Construction, Demolition & Excavation Process & Procedures

This construction management plan identifies the major activities to be undertaken within the redevelopment of Queensgate. It considers the extent and broad detail of the works and summarises construction methodologies and management procedures for the works. From a programme start in the second quarter of 2003, the complete development, including the cinema complex, will be trading within 18 months. A construction programme overview has been included in Appendix C for reference.

For clarity of understanding and presentation the programme details the major activities and is also segmented into construction stages. Plans have been coloured to illustrate the location of the works for each stage referenced on the programme. A more specific schedule of works by construction stage is provided within Section 1.3 of this Construction Management Plan. The plans indicate the location of construction zones, access points to the site and provision of construction safety hoardings.

The redevelopment programme has been broken into several stages. Each of these stages has been further considered in terms of the extent of works, general construction methodologies and management procedures to be adopted by Westfield in the delivery process.

The redevelopment of the Queensgate site will have a minimal impact on the day to day activities within Lower Hutt in regards to pedestrian and vehicular traffic. It is Westfield's intention to mitigate any negative impacts by providing clear signage directing both public and construction foot and vehicular traffic to appropriate entrance points around the site.

Proposed Construction Methodology

It is proposed to commence works in the northwestern corner of the site (Zones A & B) extending east along Waterloo Road from the intersection of Bunny Street & Waterloo Road. The structure will progress from the centre of the site and extend out to the Waterloo Road frontage. Each of the remaining stages of the development will follow in sequence as per the programme

Generally, as the structure reaches a certain height and individual floors have cured allowing for back propping to be removed, services installation will commence. Large services such as ductwork will generally take precedence in order to maintain required floor to ceiling heights.

With the structure at a certain height, precast panels will be installed to create the building enclosure system. It should be noted that each area of structure, as highlighted

on the plans as A, B, C, D, E, F, G, H or J forms an isolated structural system able to stand independently of any other part of the development. The skylight voids will have skylight assemblies installed in conjunction with temporary protection as necessary in order to commence fitout works at the various lower levels.

Once the building is enclosed, façade installed and cranes removed, the hoardings to the perimeter of the site will also be removed. This will allow all road works surrounding the site to be completed. All pedestrian and vehicular traffic will be redirected in the fashion described in Traffic Design Groups report, refer Appendix D.

Although the redevelopment is a staged process, each stage will generally consist of the following construction processes, demolition, piling, excavation, plumbing and drainage, structural steel, decking (Hi-bond / Speedeck), precast cladding and skylights. Each of these components are briefly explained in the following paragraphs.

Demolition of existing structures is required to make way for the new structure. Major demolition works will be undertaken within Zones A, B, C and D. Including demolition of existing structures up to 3 storeys high. The demolition process will be strictly managed to ensure environmental, health and safety prerequisites are complied with, specifically the safety of public and construction workers.

Excavation from the development site will be minimal when compared to the overall scale of the project. The major component of the excavation process will relate to the preparation of pile caps to support the final structure. Due to the local geology of the site piles will be required to support the new structure. The installation method to be adopted for the piles is yet to be confirmed but will consist of either driven, screw or bored piles or a combination of these techniques.

Upon completion of all foundation work the structural steel components will be loaded into the construction site and erection of the structural framework will commence. Within areas A and B this will generally proceed using mobile cranes that will be relocated as the structure progresses around the site. As the main structural components progress across the site the decking systems, consisting of either Hi-bond or Speedeck, will be installed. Completed concrete floor slabs providing working platforms for installation of items such as precast cladding and skylights.

Internal disciplines will then commence within the structural shell. Services would include fire protection systems, sprinklers and smoke detectors, mechanical air conditioning and ventilation, hydraulics, plumbing and drainage for individual tenancies, and electrical.

Once the structure and basic services have been installed installation of architectural finishes commence. These would include tiled flooring, suspended ceilings, painting and individual tenancy fitouts. The number of tradespeople present on site during this stage of work will significantly increase from previous stages of the construction process.

1.5 - Construction Traffic Management

Condition (xxi) *"A construction management plan shall be submitted for the approval of the Deputy Chief Executive Customer Service at the time the building consent is submitted. This management plan shall address adverse effects such as noise, dust, traffic and pedestrian effects*

The report entitled "Westfield Shoppingtown Queensgate – Construction Management Plan Traffic Report" produced by Traffic Design Group has been included in Appendix D. The report examines proposed access points to the centre and addresses traffic management issues for safe passage around the site for the public and construction traffic during the construction period and is to be referenced for details regarding the proposed management programme.

Briefly, the construction vehicles involved during the project will largely be removing excavation or demolition materials or supplying materials to the project. The following list illustrates the nature of the expected vehicular movements:

- **Demolition / Excavation**
  - Concrete
  - Structural steel
  - Earth

- **Structure**
  - Formwork components
  - Reinforcement
  - Concrete
  - Structural Steel
  - Blockwork

- **Building Enclosure**
  - Precast wall panels
  - Skylight assemblies
  - Roofing materials

- **Services**
  - Hydraulics
  - Electrical
  - HVAC
  - Fire Protection
  - Vertical Transport (Travelators/Escalators/Lifts.)

- **Fitout**
  - Drywall
  - Studs
  - Carpentry items
  - Glazing

- **Finishes materials**
  - Wall covering
  - Floor covering
  - Ceiling covering
  - Light fixtures
  - Services finishes

The overall principles of the traffic management plan during the construction process are aimed at:

- Minimising construction traffic on residential areas
- Guaranteeing construction worker safety
- Minimising traffic congestion
- Strategically locating loading zones for efficient materials handling
- Maintaining adequate access to businesses within Lower Hutt City

Public Transport Operations, Taxi stand.

In the interests of public safety we recommend the relocation of the Queens Drive Taxi Stand as per Traffic Design Groups report and summarised in Section 1.6, Pedestrian Routes and Crossings, of this plan.

The implementation of any changes to the existing public transport facilities will be undertaken in full consultation with Hutt City Council and the Taxi Operators.

1.6 - Pedestrian Routes & Crossings

Condition (xxi) *"A construction management plan shall be submitted for the approval of the Deputy Chief Executive Customer Service at the time the building consent is submitted. This management plan shall address adverse effects such as noise, dust, traffic and pedestrian effects."*

Ease and safety of access and circulation for pedestrians are important issues on a redevelopment project the size of Queensgate. It is anticipated pedestrians will experience some minor inconvenience during the construction period. This Plan aims to inform of steps that will be taken to ensure pedestrian traffic into and around the construction site are informed and pedestrian access ways remain safe and clearly identified during all stages.

The main entrance to the complex will continue to be at the Queens Drive/ Bunny Street corner. However, this will be enhanced to become more of a focus. Upon completion of the project additional pedestrian access points will be located within the new carpark areas and entry to Foodtown will be from the new Knights Road carpark.

In Particular this plan addresses pedestrian movements into and around the centre during the construction period along the bounding road frontages of: -

- Queens Drive
- Waterloo Road
- Knights Road
- Bloomfield Terrace
- Bunny Street

The principal adjustments to pedestrian routes will occur as follows. For specific details on how pedestrian traffic will be managed reference is to be made to the report prepared by Traffic Design Group contained within Appendix D. It should be made clear that the duration which individual site access points remain active is dependant upon the progressive staging of the works. The type of activity being undertaken necessitates whether a construction point is active or inactive. Reference should be made to the attached staging plans and programme for clarification of timing with regard to site access points. Therefore, the use of a site access point for ingress / egress will not necessarily be required for the full construction period.

Queens Drive

- The pedestrian route along Queens Drive bounding construction Zones A & B will be impacted from commencement of construction through to completion of the car park and shops. It is our intention to discuss with Hutt City Council and Taxi Operators the temporary relocation of the Queens Drive Taxi Stand. The proposed relocation of this service is in the interest of public safety and would also aid the construction process.

Waterloo Road

- The pedestrian route along Waterloo Road will be impacted during works in construction Zones B, C & D. Effects will be minor and will cause minimal disruption. Works to these Zones will be staged with Zone B being completed six months after construction starts & zones C & D being constructed from months twelve to eighteen of the construction period.

Bloomfield Terrace

- It is recommended all pedestrian traffic along the Western side of Bloomfield Terrace between Knights Road and Waterloo Road be redirected to the footpath on the eastern side of Bloomfield Terrace for the duration of works within Zones D, G and J.

Knights Road

- Throughout the duration of the project pedestrian access to Westfield Tower and the controlled pedestrian crossing adjacent will be maintained. Pedestrian traffic west of Westfield Tower will be restricted during the demolition and construction phases of works within Zone J. Works to Zone H (Farmers extension) should be contained within the site boundaries, minimizing any impact to the pedestrian traffic flow.

Bunny Street

- Works within Zone E are mainly internal with only some minor re-furbishment to the existing façade. We envisage only minimal impact to the pedestrians and the Bunny Street Bus Stop should not be affected.

Conclusion

As design progresses and construction methodology becomes more finite impact on pedestrian and vehicular traffic will become better known. Close liaison and consultation will be undertaken with Council before, during and after each stage of construction. It is our intention to keep Council fully informed of any proposed alterations that will impact the flow of pedestrian traffic in and around the development site.

1.7 - Public & Community Relations

Westfield will orchestrate a public and community relations strategy aimed to advise the community of the sequential impacts of the works, of the adjustments which will take place at pedestrian and public transport level, of the management process which will be implemented by the Westfield Shoppingtown Queensgate Centre Management team and how issues of concern to the general public may be communicated to Westfield for consideration, action and response.

The strategy will commence prior to and continue throughout the construction programme.

The strategy will include identification of community groups with whom Westfield will liase and advise the various stages of the programme in the redevelopment delivery process and how these various aspects of the process will be managed by Westfield. Typical community groups would include Hutt City Council; Police; Senior Citizen Groups and Schools.

Westfield will arrange visual presentations of the construction programme to the community groups. Additionally, graphic displays of the construction stages will be positioned within the trading area of Westfield Shoppingtown Queensgate; media releases will keep the community abreast of activities associated with the overall redevelopment programme.

In order to provide the local community with a communication link to the project, Westfield will also:

- Appoint a community Liaison Officer
- Establish a complaint register administered by Westfield Shoppingtown Queensgate Customer Services.
- Establish an appropriate protocol enabling expedient and effective response to community complaint.

The Community Liaison Officer will be experienced in the management of public relations matters in a major property development in a central shopping district such as Hutt City. The appointment and contact details will be notified to the community by way of a proposed newsletter.

The complaints register will be established upon commencement of the project.

The Community Liaison Officer will be located within the offices of Westfield Shoppingtown Queensgate Centre Management, Level 2, Westfield Tower, 45 Knights

Road – Lower Hutt. The Community Liaison Officer will work closely with the Centre Manager and Westfield Design and Construction.

The Proposed administrative protocol is summarised as follows:

All complaints submitted to the office of the Community Liaison Officer, whether written or telephoned, will be registered in terms of:

- Date:
- Time:
- Name and address of person making the complaint:
- Summary of the nature of the complaint:
- Name of the person receiving and registering the complaint:

Complaints will be passed to Westfield Design and Construction for investigation and response. The response to the complaint will be recorded in the complaint register, by:

- Date:
- Time:
- File reference of response to the complaint:

The construction works will from time to time undoubtedly cause inconvenience to the general public in and around Westfield Shoppingtown Queensgate, particularly during the demolition and excavation phases of the delivery process. Westfield's modus operandi is to programme the works as efficiently and expediously as possible to reduce any inconvenience to a minimum.

1.8 – Risk Management

Westfield considers that priority must be given to the management and control rather than "after the event" treatment measures for any of its developments where there is potential for damage to the environment or people in the areas of its construction activities.

In addition to the job specific risk assessments conducted on a trade by trade basis by Westfield NZ and all contractors as part of the planning of safe systems of work, the following potential risks to the environment have been identified and will be addressed in the planning of the redevelopment of the Queensgate Project.

Noise

Westfield has commissioned Hegley Acoustic Consultants to advise on matters relating to noise associated with the major construction activities associated with the redevelopment of Westfield Shoppingtown Queensgate. Hegley Acoustic Consultants is an Auckland acoustic company with experience and skill in assessing construction noise levels arising from major construction sites in Auckland and determining methodologies to be adopted to minimise the transmission of noise. Hegley Acoustic Consultants report is attached Appendix E to the Construction Management Plan.

Condition (xx) *"The multi level ramp adjacent to the Black Horse Property Limited building shall be acoustically treated so that there will be no adverse noise effects on the Black Horse Property. This could be achieved by cladding of appropriate density material such as concrete panels on the ramp. In this respect a certificate from a qualified acoustic expert shall be provided at the time the building consent is submitted."*

Subsequent to the Resource Consent being granted negotiations are taking place relating to the acquisition, by Westfield, of the property located on the corner of Waterloo Road & Bloomfield Terrace. If successful, the land and buildings in this area will be amalgamated in the overall redevelopment of Westfield Shoppingtown Queensgate. The inclusion of the subject property within the overall redevelopment project making this condition of Resource Consent no longer applicable.

Throughout the construction phases of the project contractors will be required to ensure all the requirements of the Resource Consent will be complied with during their completion of their contract works. Tools and machinery will have to be muffled to acceptable levels and noise monitoring of the construction works will be conducted by Westfield at the workplace and site boundaries to ensure the requirements of NZS 6803:1999 are complied with.

Noise from vehicles, powered machinery and equipment on site should not exceed the manufacturer's specifications. Any modifications must be undertaken mindful of noise and vibration generation levels. All vehicles, machinery and equipment must be maintained in accordance with the manufacturer's specifications.

Where there exists a concern that noise levels from machinery may be of a high level, no construction works shall commence unless the Contractor/subcontractor has submitted to Westfield NZ a schedule of Construction/demolition/Excavation equipment which describes the noise levels these will generate, expected time and duration of use and any measures required to ensure the noise levels are acceptable.

Control systems or devices must be deployed to reduce noise levels to acceptable levels.

Dust

Westfield considers it important for any of its developments to prepare and implement systems for the sound management of dust and to adequately manage dust rather than rely on "after the event" control remediation measures.

In planning all aspects of the work consideration will be given to the amount of suspended particulate and dust deposition likely to occur. Water sprinkler systems will be utilised where practicable to suppress dust and other suspended particulate matter to control air quality, in accordance with environmental and Resource Consent requirements.

The integrity of the existing tar sealed areas of the car parks will be maintained intact for as long as practicable to minimise the amount of dust created by traffic and other building activities

Sediment & Water Control

The primary risk identified is to enable the planned work to be undertaken in such a manner as to avoid sedimentation and contamination of the work site or the surrounding area.

The existing storm water drains will be protected through the inclusion of catchment drains, silt curtains and wool bale filters where practicable. Clean storm water will be diverted away from soils and excavations where practicable to avoid contamination of the existing storm water system.

A system of decontamination of heavy vehicles leaving the site will be utilised to minimise the extent of any likely contamination of the roads contiguous with or surrounding the site.

Should any minor deposits of dust or dirt accumulate on the public roadways from time to time, mobile sweepers will be utilised to clean the roads on a regular basis.

Non-contamination of the underground water supplies in the area will be a major concern and will be closely monitored. All contractors will receive instruction on what activities are permitted and what activities are not permitted in the area of the aquifer located in the

Southeast corner of the site. Any person caught working contrary to these requirements or instructions will be permanently removed from site.

Stockpiles and Batters

Westfield considers it important for any of its developments to appropriately manage "Stockpiles and Batters" rather than rely on "after the event" control measures. The objective of the management of stockpiles and batters is to manage them so that dust and sediment in runoffs are minimised.

To achieve this the number of stockpiles and the time stockpiles will be exposed will be minimised.

Topsoil and under burden stockpiles will be kept separate wherever practicable stockpiles will be located away from drainage lines, at least ten metres away from natural waterways and where they will be the least susceptible to wind erosion.

Stockpiles and batters will be designed with slopes no greater than 2:1 (horizontal to vertical) and where likely to remain bare for more than 28 days covered by mulch or anchored fabrics or seeded with sterile grass

Sediment controls will be established around un-stabilised stockpiles or batters dust will be suppressed as circumstances demand.

Dangerous Goods and Hazardous Substances Management

As part of site development activities there is likely to be a need to store and use a range of dangerous goods and hazardous substances on the site, such as fuels, solvents, oil based paints and other specialty finishes, brick cleaning solution, industrial strength cleaning agents and a range of sealants and adhesives.

All of these materials offer some occupational health & safety risks if not managed in accordance with the manufacturers specifications. (Specific reference should be made to the manufacturers Material Safety Data Sheets – MSDS).

However from an environmental management perspective there are the issues of the disposal of empty containers which can contain residues of these substances, and the management of spills of the materials.

Empty containers with potentially hazardous residues are considered to be contaminated waste and must not be disposed of in bins designated for general wastes. There may be some exceptions to this, such as the disposal of containers that once contained paints, resins, sealants or adhesives, where most of those residual materials have cured (i.e. oxidised and gone hard) and thus have become inert wastes. In these instances the wastes may be disposed of as general wastes.

Where ever practicable non hazardous products will be used but where no other practicable alternative exists all contractors expecting to bring toxic or hazardous chemicals on site will be required to provide Westfield NZ with Material Safety Data Sheets prior to bringing these substances onto the Project site. All contractors working on Westfield sites are required to provide Westfield with safety plans detailing safe work methods and training of personnel working with these substances.

All contractors intending to use reasonably large quantities (in excess of 20 litres) of any of these products on site will have to have included in their safety management plan, emergency response and spill control action plans.

The use of substances likely to emit hazardous fumes will be monitored and acceptable, practicable control measures put in place.

When any vehicles are refueling this will be undertaken well away from the aquifer located in the Southeast corner of the site. The actions required in the Project Spill Control Plan will be followed. Bulk fuel delivery truck operators and machine operators will be trained in what action to take in the event of a fuel or lube oil spillage.

Spill Management

Where leaks or spills of dangerous goods or hazardous substances occur, the area may become contaminated. To avoid widespread contamination the leak or spillage must be controlled and cleaned up as soon as practicable. It should be noted that some OH&S precautions may need to be taken with respect to personal protective clothing and equipment.

Spill kits will be available adjacent to fuel storage areas or at appropriate locations on the site and consist of absorbent mats, a sealable plastic drum, some dispersent/detergent, gloves, shovel, and absorbent loose material. Where soils have been contaminated they will be removed and contained in a sealed plastic drum and disposed of at an approved dumping facility.

Spills of other materials will be cleaned up in accordance with the manufacturers specifications found in the material safety data sheets. In general, precautions will be taken to avoid direct contact with spilled materials and the inhalation of vapours. Where the size of the leak or spillage is of considerable volume beyond the capability of the site team to deal with, the emergency services and local Council environment officials will be contacted as soon as practicable.

The standard Westfield Spill Control Plan contained in the environmental section of the EH&S plan for the project will be followed at all times, with key personnel, both Westfield and Contractor's receiving specific training in how to action the plan and either eliminate or minimise the risk of contamination of the environment.

Waste Management/Trade Waste.

The avoidance of waste generation is of the highest priority, followed by the recovery of wastes for recycling and reuse, and finally the treatment or disposal of the wastes is the least favoured, but is often inevitable or the only practicable option.

During the demolition phase of the project contractors will be encouraged to recycle demolition material wherever practicable.

Construction waste will be managed in as environmentally friendly way as practicable. Concrete trucks, concrete and grout pumps washing out, will not be permitted to empty concrete waste directly on to the ground. Bins will be provided for the waste to be disposed of properly at approved landfill rubbish tips.

Painters and plasterers will be provided with proper washout containment facilities to prevent solid waste in suspension with water to enter the drainage system. Any contractor caught breaching these requirements will not be permitted to continue working on the site.

Other Environmental Issues

This section covers a range of other environmental issues that can arise during site development activities.

❖ **Emergency Procedures**

Procedures will be in place, and staff trained to deal with any emergency, which could cause a major environmental impact.

Emergency management and response plans will be in place for each of the following:
- Bomb Threats
- Hazardous materials leaks and spillages; and
- Fires (for both general combustible materials and hazardous materials).

as all of these events can have adverse impacts on the surrounding environment.

Other events, such as trench collapse that impact on occupational safety will be covered in the site's emergency management and response plan. These types of issues and their proper management are covered in the company OH&S policy & procedures manual.

❖ **Litter**

On construction sites, there are two main sources of litter, building material washed away during a storm and deposited into waterways, streets etc and rubbish thrown away by construction workers. The thoughtlessness of staff and the unavailability of suitable litterbins on the construction site often cause litter.

On all Westfield project the provision of adequate rubbish bins and good housekeeping practices are an integral part of good site management. The quantity and placement of litterbins will be included in the initial planning for the development and reviewed as the development proceeds.

Environmental Inspection, Monitoring and Auditing.

❖ **General**

The objective of environmental inspection, monitoring and auditing is to ensure that individual sites are adequately managed and that control systems such as appropriate inspection monitoring and auditing are in place and operating effectively to minimise the risk to the environment.

Westfield considers that Inspections, Monitoring and Auditing are an integral part of any development. Particularly when there is the potential for impact on the environment.

❖ **Environmental Inspection**

Inspections are a key part of sound site environmental management. Inspections will be scheduled proportional to the level of risk or potential risk presented to the environment by each development/construction activity. Scheduling of site inspections will be sensitive to site specific issues.

Table 2, following, provides a list of recommended inspection requirements. Inspections identified in table 2 will be applied as the minimum requirement where practicable.

❖ **Environmental Monitoring**

Regular monitoring of all segments of the environment is a very important part of environmentally sound site management.

Air, water and noise measurements will be taken periodically. They are all necessary to determine whether standards established in the site Environmental Management Plan are being complied with. In addition monitoring will be carried out to provide information on whether sensitive sections of the environment are adequately protected.

Field samples will be collected by suitably qualified individuals and sample analysis performed by a registered laboratory for the specific tests required.

Measurements made on site will be made under the supervision of a suitably qualified person.

Table 3 provides a list of recommended monitoring. Monitoring identified in table 3 will be applied as the minimum where practicable.

❖ Environmental Auditing

Independent audits will be conducted to assess Site Environmental Performance. Auditing will be conducted by specialists in environmental auditing with experience in construction activities and construction site environmental management. Individual specialists may be required for various disciplines, e.g. air, water or noise etc.

❖ Training Requirements

Westfield procedures manuals are intended to be active documents subject to regular review and improvement. It is hoped that useful comment and suggestions will come from those who use it and that the procedures in the manual are practical and effective.

In order to ensure that the procedures in the manuals are followed it is expected that regular training will be provided to staff, sub-contractors and casual employees on the content and expectations of each subject area within the manual.

It is expected that via toolbox meetings staff can be provided with an extract from this manual on a given topic for its discussion and review.

Personnel will complete a training attendance register for each session attended and these will be filed in the project training register.

Table 2
Site Inspection Requirements

Installation	Possible Problems	Frequency	Remedial Action
Drainage	New drain lines not controlled	At least once every two days in areas where earth moving is occurring. Weekly elsewhere.	Install appropriate sediment controls on new drainage lines.
Sediment controls, silt fences and traps	Not controlled effectively	Daily in dry weather. Within first two hours of a storm. Three times a day during prolonged rainfall.	Remove sediment from trap. Replace barrier or filter material. Redesign installation. Improve maintenance.
Haul Roads	Dust. Soil on paved roads.	At least daily.	Pave hauls roads with gravel or impervious sealant. Install wheel washes and/or rumble grids. Manually wash vehicle wheels. Increase road-cleaning frequency.
Cut-off and diversion drains.	Water not diverted away from sensitive areas.	Weekly.	Replace or repair damaged drains. Redesign ineffective drains.
In-stream weirs.	Ineffective during low flow. Release of trapped sediment during storms.	Weekly in dry weather. 24 hours before forecast rain.	Removal of sediment trapped behind weir. Clean out behind weir if filled to 25% capacity.
Stream Crossing.	Unstable. Release of sediment and soil into stream.	When in use, but no less than weekly.	Stop use until installation has been redesigned.
Vegetated buffer zones.	Accidental clearance.	Weekly.	Re-vegetate. Review procedures to ensure no recurrence.
Retardation and settlement basins and artificial wetlands.	Sediments not effectively removed.	Weekly.	Minimise exposure to run-off action of wind. Ensure stabilisation measures are effective.
Stockpiles and bare slopes.	Erosion.	Weekly.	Minimise exposure to run off and action of wind. Ensure stabilisation measures are effective.

Table 2 continued.

Installation	Possible Problems	Frequency	Remedial Action
Unvegetated areas.	Dust.	Daily during dry weather.	Increase use of water spray on un-vegetated areas. Protect un-trafficked areas temporarily with mulch or geofabric blanket.
Vehicles & Machinery.	Noise pollution. Exhaust gases.	Initially when vehicle or machinery is introduced to site and thereafter monthly.	Ensure that muffler and noise shielding are effective. Ensure that emission controls are effective and motors well maintained.
Chemical Storage areas.	Spills/leaks.	Weekly.	Clean up contaminated area. Improve containment.
Litter controls.	Litter on site.	Daily on and off site.	Clean up litter originating on-site. Review number and placement of rubbish bins. Ensure materials are not stored in such a way that they could contribute to litter. Speak to staff about litter disposal.

Table 3
Monitoring Requirements

Areas of Risk	Purpose	Monitoring Requirements	Remedial Action
Noise.	Determine whether a noise nuisance exists.	Regularly on site at source and also at site boundaries. As required by complainants at their homes. Monitor noise continuously at a representative residence near construction activities.	Review and enhance noise control measures.
Air Quality (dust).	Determine whether a dust nuisance exists.	Daily during dry weather for dust deposits at locations that indicate impact on adjacent residents or at site boundary.	Improve controls on dust emissions.
Water Quality (chemical and biological).	Quantify downstream chemical and biological impact. Identify ineffective sediment control installations.	Design chemical and biological monitoring program by regularly surveying upstream and downstream sites, in consultation with water resource manager, to assess impact on stream ecology under all flow conditions. Install continuous monitors for turbidity and flow.	Revise on-site controls if regulatory standards are breached. Revise risk assessment and management. Identify and repair failed control installation.
Sediment controls, silt fences and traps.	Determine whether the installation is operating effectively.	Measure turbidity on the input and output side of control devices during wet weather inspections (see inspection table, Table 2).	Redesign control devices.
Discharge from retention ponds, artificial wetlands and sediment dams.	Determine whether retention structures are effectively removing sediment.	Weekly for suspended solids, conductivity, pH and dissolved oxygen, and daily rainfall.	Redesign retention structures.
Contaminated water being pumped to the storm water system or natural waterway.	Ensure that natural waters are not adversely affected by pump-out water.	Measure turbidity every hour during pumping.	Stop pumping if turbidity exceeds regulatory standards.
Excavated material.	Detect old fill material that may contain contaminated soils or rubble.	Daily in areas being excavated.	Analyse fill material suspected of being contaminated. Contract hazardous waste disposal company to remove contaminated material to approved landfill.

Table 4
Project Environment Checklist

This checklist summarises the specific environmental issues that need to be addressed on construction sites.

Provision is made in the list for the manager to check off each issue as it relates to the site.

Issue	Action Taken
Compliance with legislative requirements.	❖ Collect copies of all legislation, regulations and government policy. ❖ Ensure management is aware of requirements and implements due diligence systems to ensure compliance. ❖ Use documents collected to set minimum standards in the Environment management plan.
Pre-construction planning environmental assessment.	❖ Assess all possible impacts that the project will have on the environment. ❖ Determine whether construction activities will intersect a contaminated site or old rubbish dump. ❖ Assess the impact of the development on the amenity of the adjacent residents. ❖ Commence monitoring all segments of the environment to determine background conditions.
Risk assessment information.	❖ Collect all relevant information on site and adjacent areas that may be affected by the development. ❖ Collect relevant weather and climate information. ❖ Obtain design plans, work schedules and work programs that may contribute to environmental risk. ❖ Obtain a map of the site topography as a result of the development. ❖ Calculate storm water flows in each micro-catchment for each phase of the development. ❖ Map changes of vegetative cover and position of stockpiles and batters as a function of time. ❖ Collect information on stream flows of any natural waterways affected by the development.
Assessing and managing risks.	❖ Identify all hazards to the environment. ❖ Quantify hazards, wherever possible. ❖ Determine the consequence of each hazard. ❖ Calculate the total risk level for each hazard. ❖ Rank risks. ❖ Identify all significant risks. ❖ Develop an action plan to address all significant risks. ❖ Wherever possible seek to avoid risk or minimise them by modifying the project design or planned work program and schedule. ❖ Based on information from monitoring, inspection and surveillance, update the risk assessment, management and environmental management plans.

Table 4 continued

Issue	Action Taken
Pre-caution works.	❖ Install a storm water drainage system (particularly to divert storm water around the site) and major sediment controls prior to project commencement.
Environmental management system.	❖ Ensure that all staff are adequately trained. ❖ Ensure all procedures are written down. ❖ Ensure that control and quality assurance systems are in place to ensure effectiveness of the environmental management system. ❖ Prepare an environmental management plan based on the risk management action plan.
Prepare plan.	❖ List special work procedures to avoid or reduce environmental harm. ❖ Map cleared areas as a function of time. ❖ Map changes to land form as a function of time and identify on the map control measures and the position of stockpiles and batters. ❖ Include any special operational procedures in the work site manual required to protect the environment. ❖ Ensure that written contingency plans have been prepared and adequately resourced. ❖ Ensure that best practice documents for the site are prepared and implemented. ❖ Document maintenance, inspection and surveillance schedules ❖ Prepare a rehabilitation plan. ❖ Update the plan as required.
Land Disturbance/ erosion.	❖ Characterise the erosion potential of the site during each phase of the development. ❖ Take action to minimise clearance of vegetation. ❖ Implement controls and reschedule works to reduce erosion. ❖ Stabilise cleared areas as soon as possible. ❖ Avoid working on areas vulnerable to erosion wherever possible.
Storm water management.	❖ Reduce the quantity of contaminated storm water entering the project site. ❖ Reduce water velocities where ever practicable. ❖ Reduce storm water flows over bare slopes.
Erosion and sediment control devices.	❖ Design control devices to handle expected peak water flows. ❖ Treat intercepted water if required, prior to discharge to the environment. ❖ Install control devices as required. ❖ Install in-stream weirs as required. ❖ Implement a maintenance and inspection schedule for control devices. ❖ Prepare a contingency plan and ensure it is adequately resourced. ❖ Improve the design of control measures if they don't operate effectively.

Table 4 continued

Issue	Action Taken
De-watering work site.	❖ Establish procedures to ensure that contaminated water is not pumped into a natural waterway without adequate treatment. ❖ Ensure procedures are in place to ensure that pumping operations are supervised and monitored.
Dust control.	❖ Implement a dust prevention strategy. ❖ Pave hauls roads. Ensure adequate watering or treatment of areas that could give rise to dust.
Stockpiles and batters.	❖ Implement a management program to minimise erosion and sediment run off from stockpiles and bare batters. ❖ Stabilise stockpiles and batters, if they are to remain bare for more than 28 days. ❖ Establish sediment controls around un-stabilised stockpiles and batters.
Working in waterways and floodplains	❖ Consult the responsible drainage body for approval. ❖ Establish procedures to minimise impact on the waterway. ❖ Design and construct stream crossings, if required, to minimise impact on the waterway. ❖ Ensure that written contingency plans have been prepared and adequately resourced. ❖ Prepare a reinstatement plan and submit to the relevant drainage authority for approval.
Noise and vibration.	❖ Establish procedures that comply with limits on working hours. ❖ Implement procedures so the adjacent residents are advised of out of hours works. ❖ Regularly service machinery and vehicles. ❖ Reduce noise to acceptable levels. ❖ Schedule deliveries so that they do not cause impairment of local amenity. ❖ Install appropriate noise abatement structures if required. ❖ Take measures to ensure that vibration does not impact on residents.
Waste minimisation.	❖ Implement a waste minimisation assessment. ❖ Set waste minimisation targets. ❖ Implement programs to reduce waste that needs to be disposed of.
Contaminated material and soils.	❖ Analyse material uncovered on-site that could be contaminated or contain wastes. ❖ Establish procedures to excavate contaminated material or waste so as not to cause environmental problems and seal remaining materials. ❖ Establish and implement procedures for appropriate transport and disposal of contaminated material waste.

Table 4 continued

Issue	Action Taken
Emergency procedures.	❖ Establish procedures for emergency situations.
Air quality.	❖ Implement an adequate maintenance regime for vehicle and machinery exhausts. ❖ Install controls on equipment or vehicles that are polluting the atmosphere.
Litter.	❖ Establish procedures to avoid generation of litter. ❖ Install adequate litterbins on-site. ❖ Implement a staff awareness programme.
Storage of chemicals and fuel.	❖ Establish procedures to minimise the quantities of chemicals and fuels required to be stored on site. ❖ Install bunding around storage areas. ❖ Implement adequately resourced contingency plans.
Road cleaning.	❖ Install wheel washes and /or rumble grids as required. ❖ Implement a programme for adequate cleaning of roads as required. ❖ Install lined litter traps inside entry pits if required. ❖ Ensure that trucks taking solid waste off-site are covered.
Inspections, monitoring and audits.	❖ Implement an adequate programme of inspections, monitoring and audits.

1.9 – Fire Risk

The emergency evacuation plan included in this Construction Management Plan relates specifically to the evacuation of contractors and sub-contractors from the construction site. The risk of fire is greater within the operating shopping centre. In recognition of this fact Westfield Shoppingtown Queensgate Centre Management liase directly with the New Zealand Fire Service to address evacuation procedures from the operating shopping centre. These evacuation procedures for the operational shopping centre will evolve with the redevelopment programme. As each stage progresses the plan will require modification, any modifications implemented by Centre Management will be fully evaluated and approved by the New Zealand Fire Service.

A copy of the report on emergency access prepared by Westfield Shoppingtown Queensgate Centre Management and reviewed by the New Zealand Fire Service is contained within Appendix F. This plan outlines specific requirements that are to be implemented throughout the duration of the redevelopment project.

Also included in Appendix F is an extract from the Beca Carter Hollings & Ferner Ltd Fire Design. This report has been compiled to address the overall fire design of the completed redevelopment, however, specific mention of fire protection requirements during construction were made and it is appropriate that these be included in this Construction Management Plan for reference.

This section of the Construction Management Plan is to be read in conjunction with Appendix G – Site-Specific Environmental Health & Safety Management Plan and Appendix B – Site Plan Construction Zones.

1.10 – Site Safety

Westfield is committed to ensuring the health, safety and welfare of all persons (including employees, contractors, centre management, retailing personnel and members of the public) at its workplaces.

To achieve this objective, Westfield New Zealand has in place, and will improve continuously, a comprehensive OH&S Compliance System.

This System seeks to ensure the health, safety and welfare of all persons by facilitating:

- compliance with all applicable legislation and regulations;
- compliance with all standards and Codes of Practice;
- adoption of a "best practice" approach to OH&S; and
- integration of OH&S into all aspects of the Company's planning and operations.

In implementing this policy and this system, Westfield will:

- identify potential work risks and hazards;
- develop safe work procedures and programmes;
- provide appropriate induction, training and supervision;
- develop appropriate emergency plans;
- facilitate the rehabilitation of ill or injured employees;
- establish workplace OH&S committees
- adopt a consultative approach with employees, contractors, centre management, and other affected groups concerning OH&S issues;
- disseminate OH&S information;
- document and apply consistently, appropriate disciplinary procedures;
- audit compliance with safe work procedures and programmes; and
- provide adequate resources in order to implement this policy and this system.

Employees of Westfield, contractors and their employees and other persons at Westfield workplaces, will be held accountable for OH&S performance within their own areas of control.

Westfield is committed to the ongoing implementation of this Policy and will monitor and review its effectiveness regularly.

An environmental health and safety management plan has been developed specifically for the Queensgate redevelopment project. This document has been based on Westfield's generic health and safety policy and a copy attached in Appendix G for reference. On request, Westfield's complete Occupational Health and Safety policy can be viewed.

Compliance with the Westfield occupational health and safety policy sees each individual working on the construction site participate in a safety induction. This induction process alerts the contractor to the Westfield Health & Safety Policies and Procedures and ensures only contractors, Westfield employees and staff who have attended an induction seminar gain access to the construction zone.

All contractors and subcontractors engaged by Westfield to carry out works on the redevelopment site are required to submit to Westfield their safety Management Plan for approval. Contractors Safety Plans must be submitted and approved by Westfield prior to commencing work on site. All Safety Plans are stored on site for reference throughout the contract period.

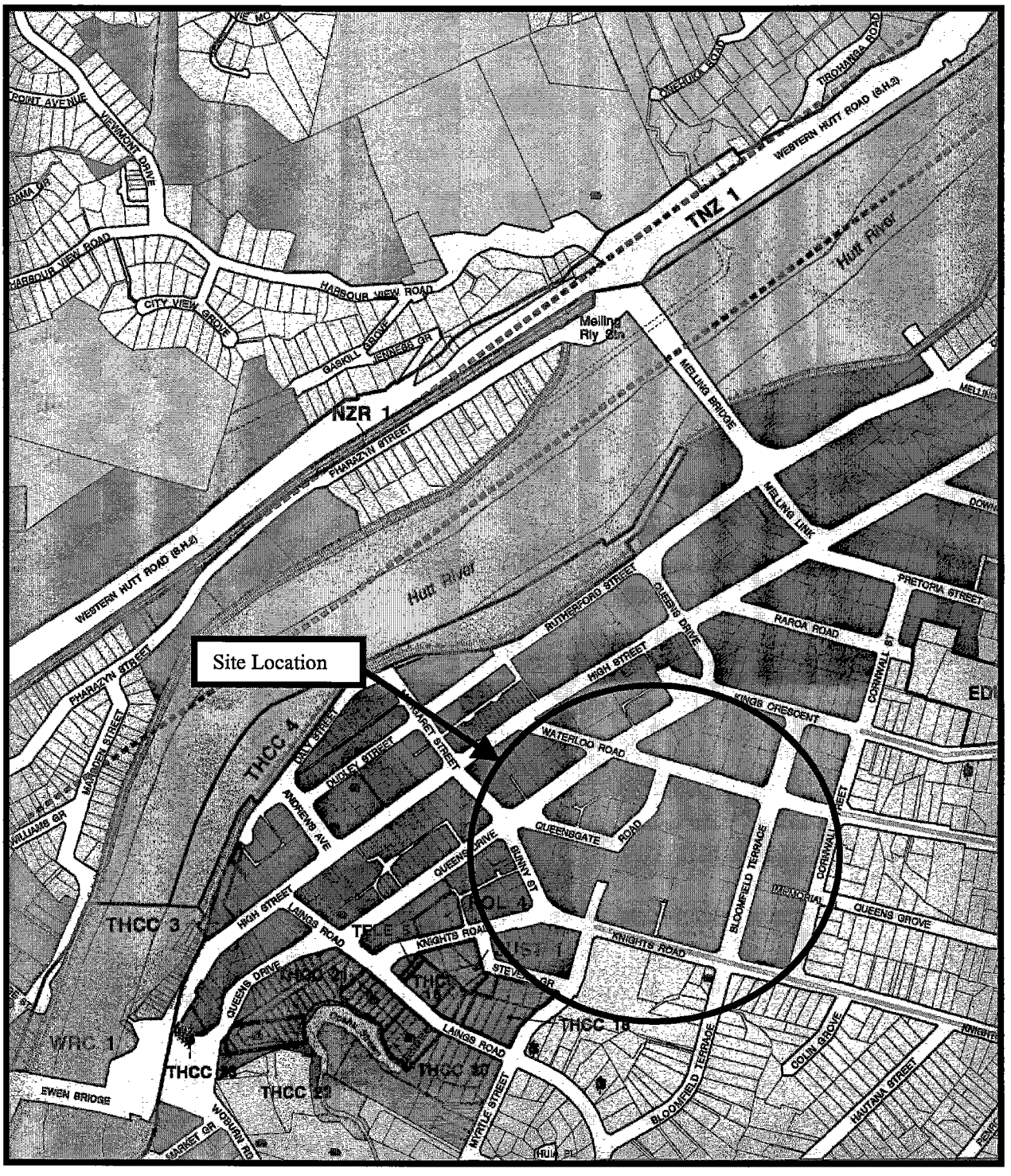
In addition to the above Westfield is a member of Site Safe New Zealand. This is an independent industry organisation wholly dedicated to reducing deaths and injuries in the construction industry. Membership of this organisation not only enhances Westfield's existing safety policies but also ensures contractors engaged on Westfield Construction Sites are inducted in an industry wide health and safety training programme.

Further information about Site Safe New Zealand can be viewed on their website, www.sitesafe.org.nz.

Appendices

A	**Locality Plan**
B	**Site Plan – Construction Zones**
C	**Construction Programme**
D	**Construction Traffic Management Report**
E	**Noise Report**
F	**Fire Reports**
G	**Site Specific Environmental Health & Safety Management Plan.**

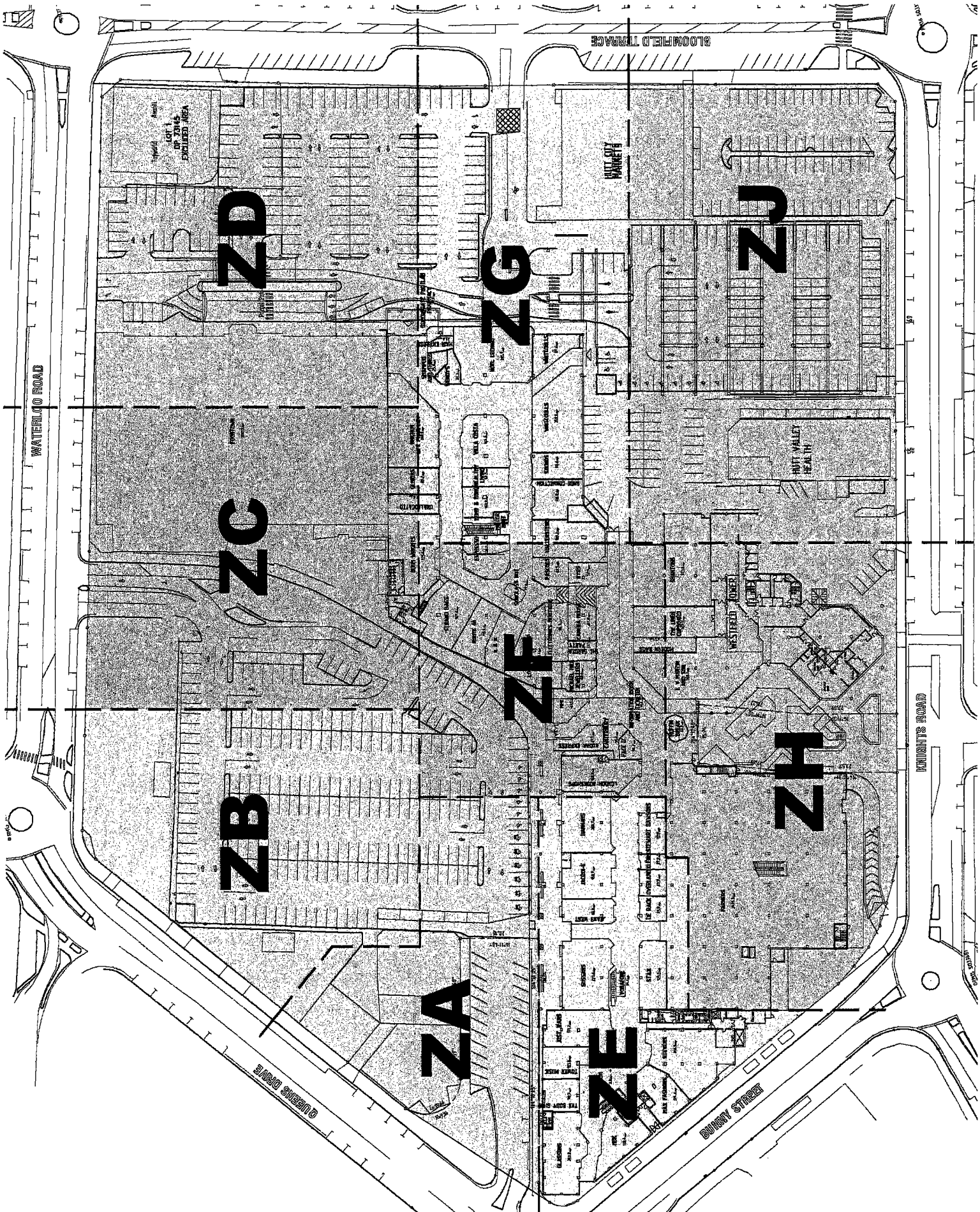
A – Locality Plan



Site Location Plan

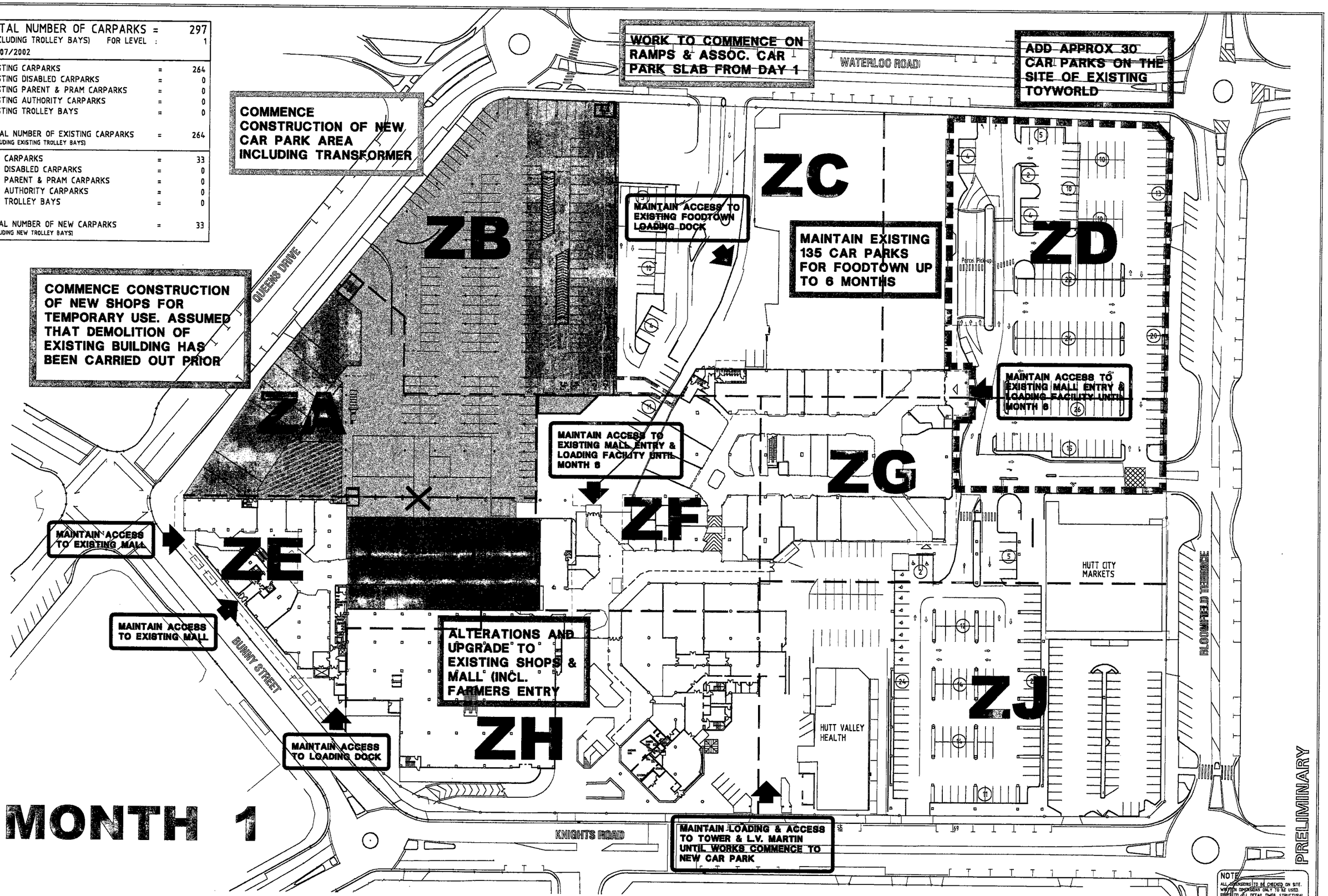
Source: Proposed District Plan – City of Lower Hutt

B – Site Plan – Construction Zones



LEVEL 1 - EXISTING SITE PLAN
CONSTRUCTION ZONES A-J

TOTAL NUMBER OF CARPARKS =		297
(EXCLUDING TROLLEY BAYS) FOR LEVEL :		1
04/07/2002		
EXISTING CARPARKS	=	264
EXISTING DISABLED CARPARKS	=	0
EXISTING PARENT & PRAM CARPARKS	=	0
EXISTING AUTHORITY CARPARKS	=	0
EXISTING TROLLEY BAYS	=	0
TOTAL NUMBER OF EXISTING CARPARKS (EXCLUDING EXISTING TROLLEY BAYS)	=	264
NEW CARPARKS	=	33
NEW DISABLED CARPARKS	=	0
NEW PARENT & PRAM CARPARKS	=	0
NEW AUTHORITY CARPARKS	=	0
NEW TROLLEY BAYS	=	0
TOTAL NUMBER OF NEW CARPARKS (EXCLUDING NEW TROLLEY BAYS)	=	33



NOTE
ALL DIMENSIONS TO BE CHECKED ON SITE. WRITTEN DIMENSIONS ONLY TO BE USED. REFER TO ALL DETAIL DWGS, STRUCTURAL MECHANICAL & SERVICE DWGS BEFORE COMMENCING WORK. REFER ANY DISCREPANCIES TO ARCHITECTS.

Date	By	Description	Rev.	Date	By	Description	Rev.	Date	By	Description
01/07/02	BV	PRELIMINARY ISSUE								
04/07/02	BV	AMENDMENTS AS INSTRUCTED BY SD								
16/11/02	BV	ZONES INDICATED								

Westfield

Westfield (New Zealand) Limited
L3 cnr REMUERA RD & NUFFIELD ST, New Market, AUCKLAND, New Zealand
Telephone : (09) 978 5050
Fax Num. : (09) 978 5070
Project Architect Mark Oakley

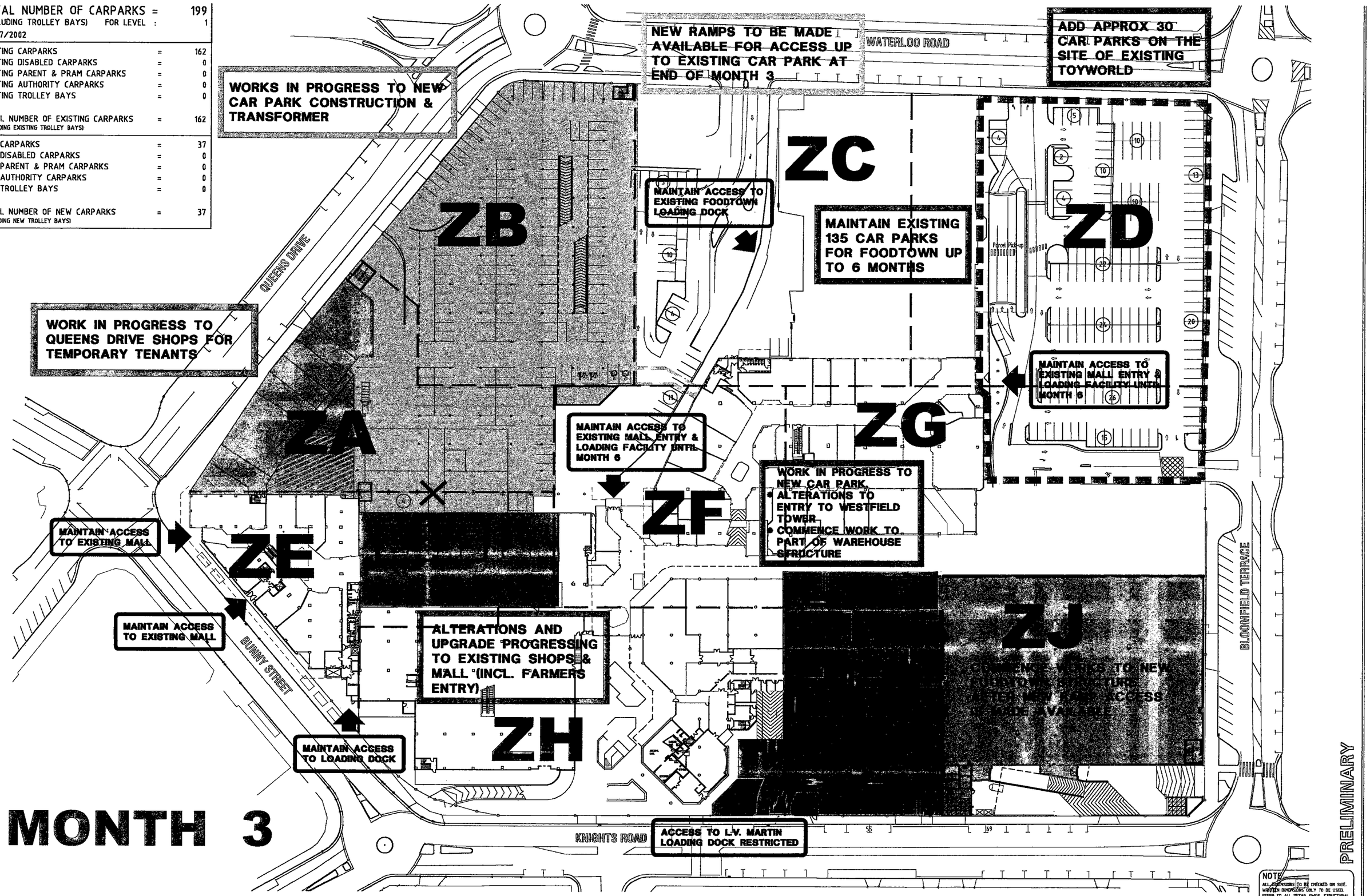
Tetrad Design Group Limited
Architects and Interior Designers
4 Jervoy Street, Box 5355, Te Aro, Wellington, New Zealand.
Tel 04-382 9797 Fax 04-385 9256
Checked

Other Consultants
Structural Engineer
Steve Carter Holdings & Farmer Ltd
Tel 04-472 7051 Fax 04-473 7911
Services Engineer
Montgomery Watson NZ Ltd
Tel 04-381 6700 Fax 04-381 6739
Drawn by B Venner

Project QUEENSGATE REDEVELOPMENT
Title LEVEL 1 - MONTH 1
PROPOSED CONSTUCTION STAGING PLAN

Scale	Project/Job Number	Computer Ref.	Drawing Number
1:500 1:1000	01019	L1-MONTH 1	STL1-1
Library Ref. J:/QG/CD	Scheme 35	Date Plotted 01/07/02	Revision 3

TOTAL NUMBER OF CARPARKS (EXCLUDING TROLLEY BAYS) 04/07/2002		199
FOR LEVEL	:	1
EXISTING CARPARKS	=	162
EXISTING DISABLED CARPARKS	=	0
EXISTING PARENT & PRAM CARPARKS	=	0
EXISTING AUTHORITY CARPARKS	=	0
EXISTING TROLLEY BAYS	=	0
TOTAL NUMBER OF EXISTING CARPARKS (EXCLUDING EXISTING TROLLEY BAYS)	=	162
NEW CARPARKS	=	37
NEW DISABLED CARPARKS	=	0
NEW PARENT & PRAM CARPARKS	=	0
NEW AUTHORITY CARPARKS	=	0
NEW TROLLEY BAYS	=	0
TOTAL NUMBER OF NEW CARPARKS (EXCLUDING NEW TROLLEY BAYS)	=	37



NOTE
ALL DIMENSIONS TO BE CHECKED ON SITE.
WRITTEN DIMENSIONS ONLY TO BE USED.
REFER TO ALL DETAIL DWGS, STRUCTURAL MECHANICAL & SERVICE DWGS BEFORE COMMENCING WORK.
REFER ANY DISCREPANCIES TO ARCHITECTS.

CAD FILE No. J:\QG\Construction Staging\L1 - month 3.dwg - 19/11/02 - 11:41AM

Rev.	Date	By	Description
1	01/07/02	EV	PRELIMINARY ISSUE
2	04/07/02	EV	AMENDMENTS AS INSTRUCTED BY SD
3	19/11/02	EV	ZONES INDICATED

Westfield (New Zealand) Limited
L3 cnr REMUERA RD & MUFFIELD ST, New Market, AUCKLAND, New Zealand
Telephone : (09) 978 5050
Fax Nam. : (09) 978 5070
Project Architect Mark Oakley

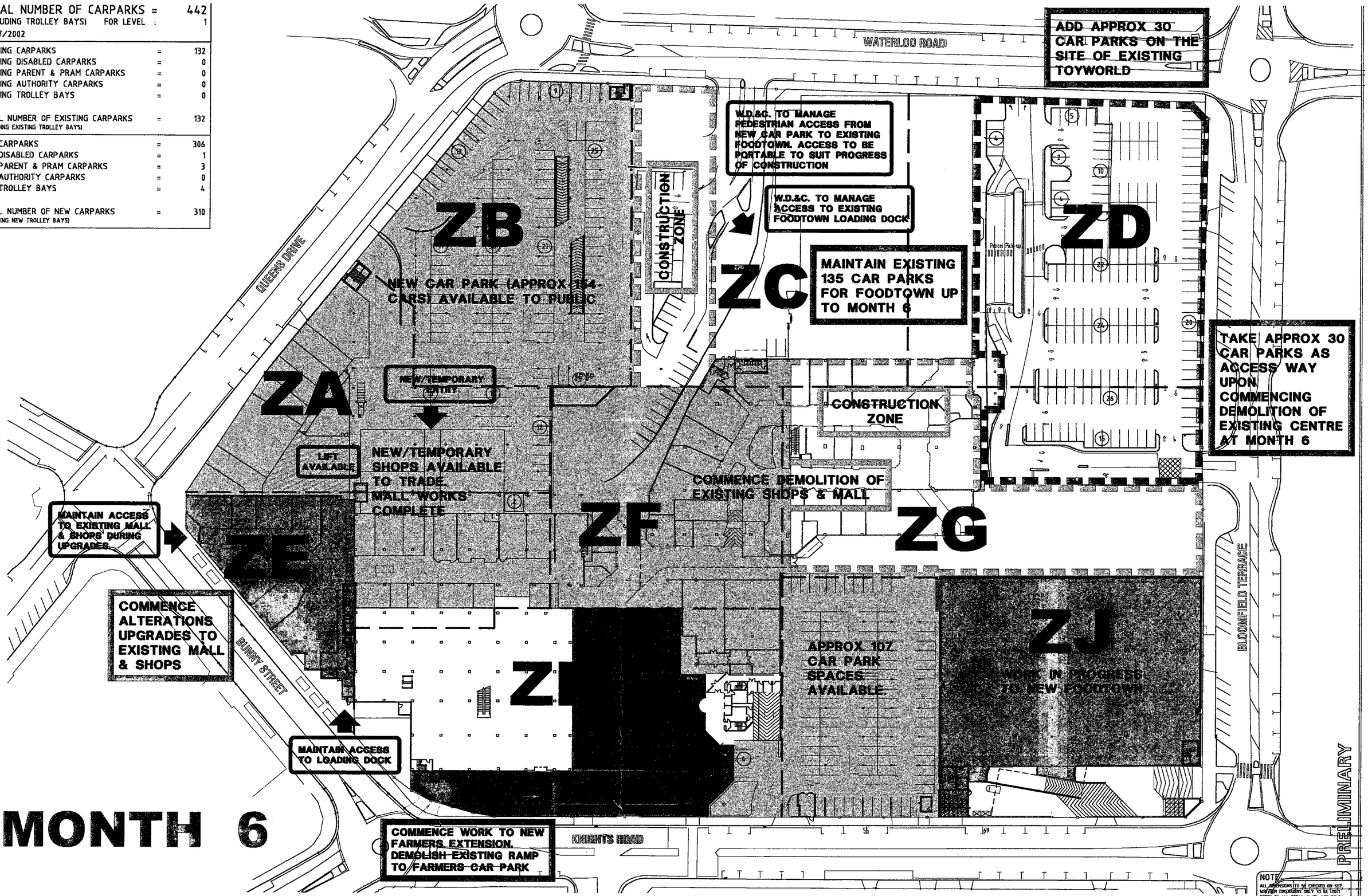
Tetsuo Design Group Limited
Architects and Interior Designers
4 Hepburn Street, S.P. 1555, St Jns, Auckland, New Zealand
Tel 04-385 9257 Fax 04-385 1238

Other Consultants
Structural Engineer
Dave Carter Holings & Farner Ltd
Tel 04-473 7531 Fax 04-473 7911
Services Engineer
Montgomery Watson NZ Ltd
Tel 04-381 6700 Fax 04-381 6739

Checked
Drawn by S Venner

Project	QUEENSGATE REDEVELOPMENT	Scale	1:500 1:1000	Project/Job Number	01019	Computer Ref.	L1-MONTH 1	Drawing Number	STL1-3
Title	LEVEL 1 - MONTH 3 PROPOSED CONSTUCTION STAGING PLAN	Library Ref.	J:/QG/CD	Scheme	35	Date Plotted	01/07/02	Revision	3

TOTAL NUMBER OF CARPARKS =		442
(EXCLUDING TROLLEY BAYS) FOR LEVEL :		1
04/07/2002		
EXISTING CARPARKS	=	132
EXISTING DISABLED CARPARKS	=	0
EXISTING PARENT & PRAM CARPARKS	=	0
EXISTING AUTHORITY CARPARKS	=	0
EXISTING TROLLEY BAYS	=	0
TOTAL NUMBER OF EXISTING CARPARKS (EXCLUDING EXISTING TROLLEY BAYS)	=	132
NEW CARPARKS	=	306
NEW DISABLED CARPARKS	=	1
NEW PARENT & PRAM CARPARKS	=	3
NEW AUTHORITY CARPARKS	=	0
NEW TROLLEY BAYS	=	4
TOTAL NUMBER OF NEW CARPARKS (EXCLUDING NEW TROLLEY BAYS)	=	310



NOTE
ALL DIMENSIONS TO BE CHECKED ON SITE. WRITTEN DIMENSIONS ONLY TO BE USED. REFER TO ALL DETAIL DWGS, STRUCTURAL MECHANICAL & SERVICE DWGS BEFORE COMMENCING WORK. REFER ANY DISCREPANCIES TO ARCHITECTS.

Rev.	Date	By	Description
1	03/07/02	BV	PRELIMINARY ISSUE
2	04/07/02	BV	AMENDMENTS AS INSTRUCTED BY SD
3	19/11/02	BV	ZONES DEDICATED

Rev. | Date | By | Description | Rev. | Date | By | Description

Westfield (New Zealand) Limited
L3 cnr REMUERA RD & NUFFIELD ST, New Market, AUCKLAND, New Zealand
Telephone : (09) 978 5050
Fax Num. : (09) 978 5070
Project Architect Mark Oakley

Checked

Other Consultants
Structural Engineer: Dixon Carter Holdings & Farmer Ltd, Tel 04-473 7531 Fax 04-473 7911
Services Engineer: Montgomery Watson NZ Ltd, Tel 04-381 6700 Fax 04-381 5739

Drawn by B Venner

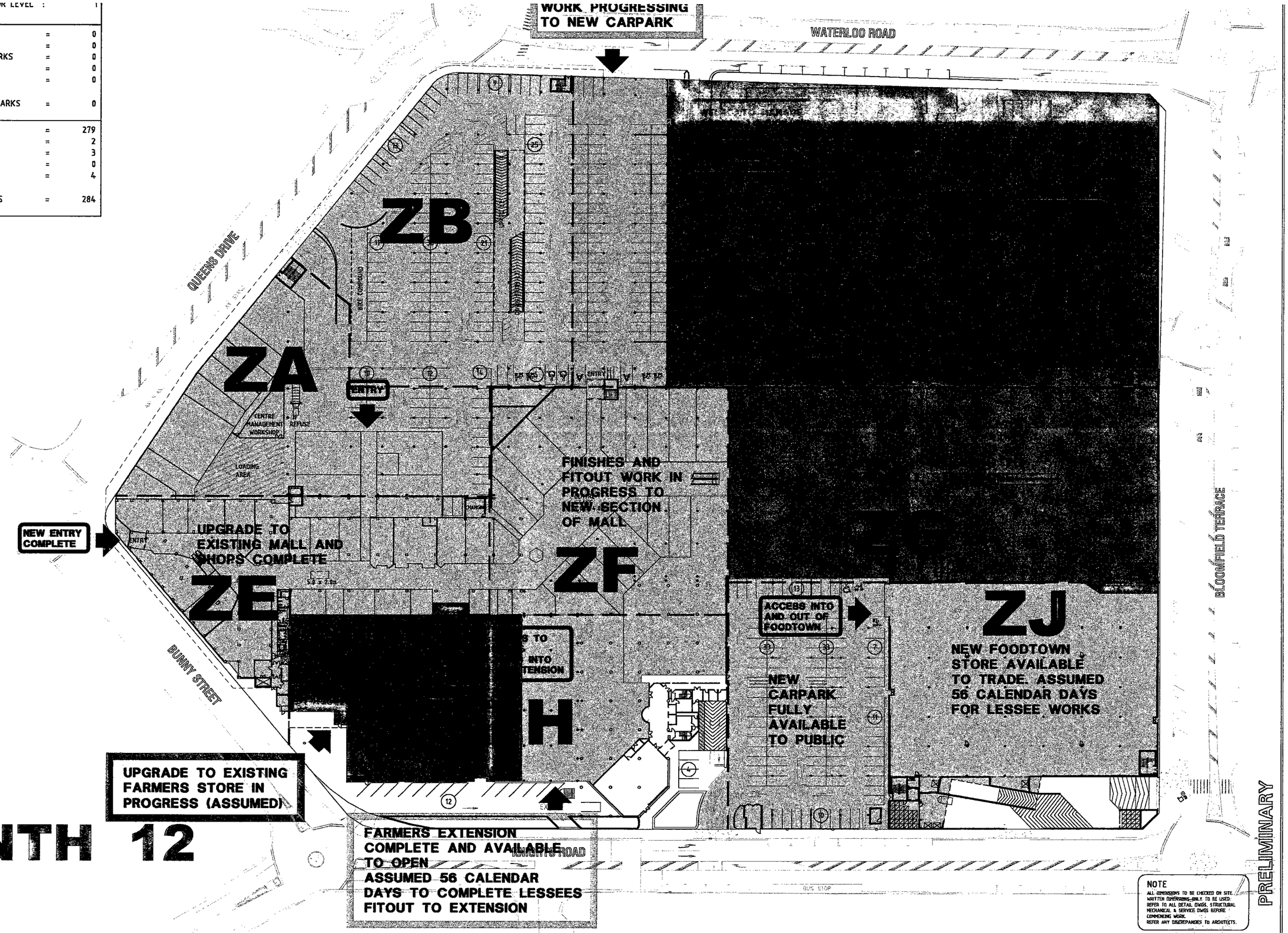
Project: QUEENSGATE REDEVELOPMENT

Title: **LEVEL 1 - MONTH 6**
PROPOSED CONSTUCTION STAGING PLAN

Scale	Project/Job Number	Computer Ref.	Drawing Number
1:500 1:1000	01019	L1-MONTH 6	STL1-6
Library Ref. J:/QG/CD	Scheme 35	Date Plotted 03/07/02	Revision 3

CAD FILE NO. J:\QG\Construction Staging\L1 - month 6.dwg - 19/11/02 - 11:47AM

(EXCLUDING TROLLEY BAYS) FOR LEVEL : 04/07/2002		1
EXISTING CARPARKS	=	0
EXISTING DISABLED CARPARKS	=	0
EXISTING PARENT & PRAM CARPARKS	=	0
EXISTING AUTHORITY CARPARKS	=	0
EXISTING TROLLEY BAYS	=	0
TOTAL NUMBER OF EXISTING CARPARKS (EXCLUDING EXISTING TROLLEY BAYS)	=	0
NEW CARPARKS	=	279
NEW DISABLED CARPARKS	=	2
NEW PARENT & PRAM CARPARKS	=	3
NEW AUTHORITY CARPARKS	=	0
NEW TROLLEY BAYS	=	4
TOTAL NUMBER OF NEW CARPARKS (EXCLUDING NEW TROLLEY BAYS)	=	284



MONTH 12

NOTE
ALL DIMENSIONS TO BE CHECKED ON SITE.
WRITTEN DIMENSIONS ONLY TO BE USED.
REFER TO ALL DETAIL DWGS, STRUCTURAL MECHANICAL & SERVICE DWGS BEFORE COMMENCING WORK.
REFER ANY DISCREPANCIES TO ARCHITECTS.

CAD FILE No. J:\QG\Construction Staging\L1 - month 12.dwg - 19/11/02 - 11:52AM

Rev.	Date	By	Description
1	03/07/02	PR	PRELIMINARY ISSUE
2	04/07/02	PR	AMENDMENTS AS INSTRUCTED BY SD
3	19/11/02	BW	ZONES INDICATED

Rev. | Date | By | Description | Rev. | Date | By | Description

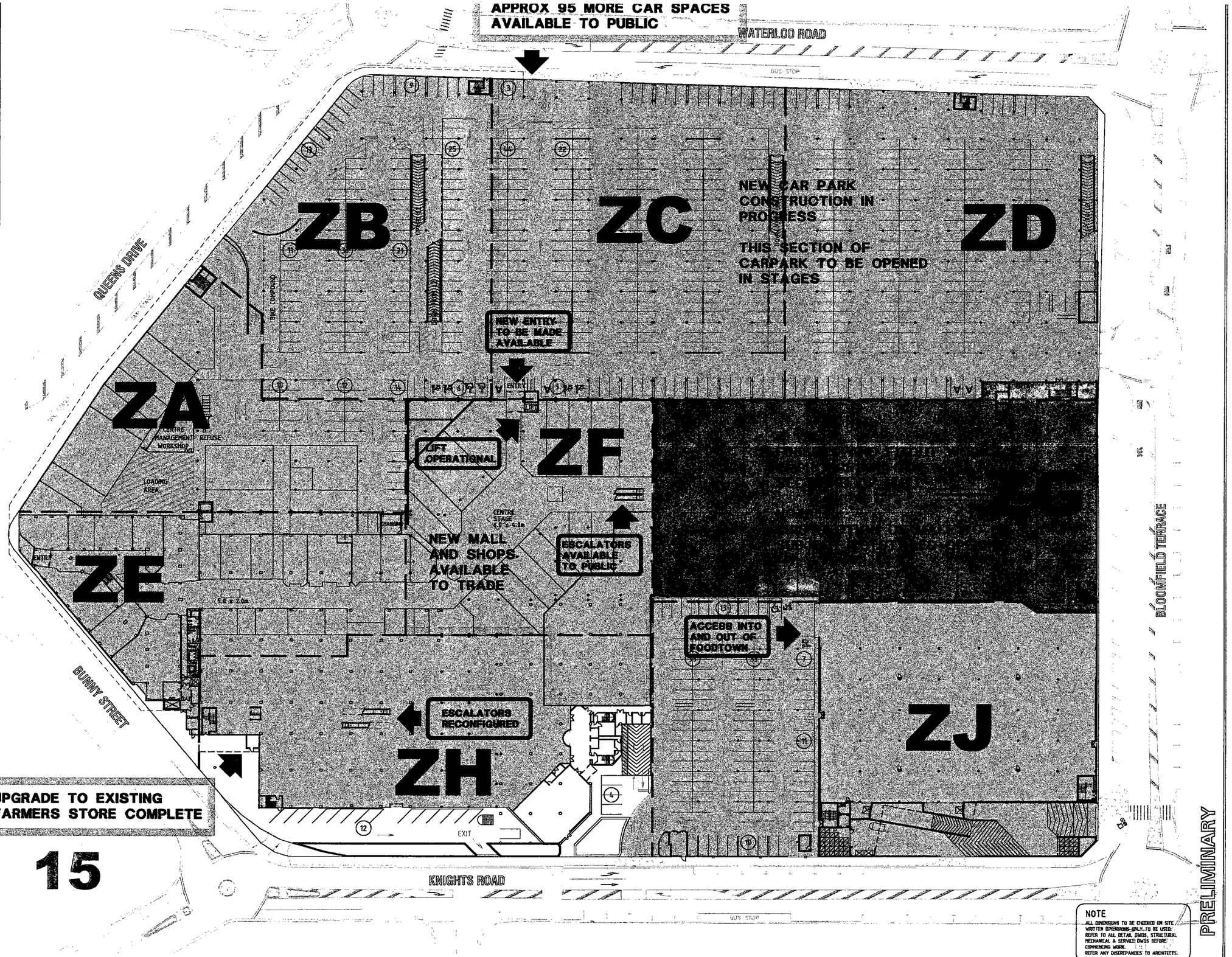
Westfield (New Zealand) Limited
L3 cnr REMUERA RD & NUFFIELD ST, New Market, AUCKLAND, New Zealand
Telephone : (09) 978 5050
Fax Num. : (09) 978 5070
Project Architect Mark OakleyChecked

Tetrad Design Group Limited
Architects and Interior Designers
4 Hepburn Street, PO Box 9553, St Ms, Auckland, New Zealand
Tel 04-385 9367 Fax 04-385 9338
Drawn by PR

Other Consultants
Structural Engineer
Dave Carter Holings & Farmer Ltd
Tel 04-473 7681 Fax 04-473 7911
Services Engineer
Montgomery Watson NZ Ltd
Tel 04-381 6700 Fax 04-381 6739

Project QUEENSGATE REDEVELOPMENT	Scale 1:500	Project/Job Number 01019	Computer Ref. L1-MONTH12	Drawing Number STL1-12
Title **LEVEL 1 - MONTH 12** PROPOSED CONSTRUCTION STAGING PLAN	Library Ref. J:/QG/STA..	Scheme 35	Date Plotted 03/07/02	Revision 3

(EXCLUDING TROLLEY BAYS) FOR LEVEL :		1
04/07/2002		
EXISTING CARPARKS	=	0
EXISTING DISABLED CARPARKS	=	0
EXISTING PARENT & PRAM CARPARKS	=	0
EXISTING AUTHORITY CARPARKS	=	0
EXISTING TROLLEY BAYS	=	0
TOTAL NUMBER OF EXISTING CARPARKS (EXCLUDING EXISTING TROLLEY BAYS)	=	0
NEW CARPARKS	=	342
NEW DISABLED CARPARKS	=	3
NEW PARENT & PRAM CARPARKS	=	5
NEW AUTHORITY CARPARKS	=	2
NEW TROLLEY BAYS	=	5
TOTAL NUMBER OF NEW CARPARKS (EXCLUDING NEW TROLLEY BAYS)	=	352



MONTH 15

PRELIMINARY

NOTE
ALL DIMENSIONS TO BE CHECKED ON SITE. WRITTEN DIMENSIONS ONLY TO BE USED. REFER TO ALL DETAIL DWGS, STRUCTURAL MECHANICAL & SERVICE DWGS BEFORE COMMENCING WORK. REFER ANY DISCREPANCIES TO ARCHITECTS.

CAD FILE No. J:\QG\Staged plans\July 2002\L1 - month 15.dwg - 04/07/02 - 4:29PM

Rev.	Date	By	Description
1	02/07/02	PR	PRELIMINARY ISSUE
2	04/07/02	PR	AMENDMENTS AS INSTRUCTED BY SD
3	10/11/02	GW	ZONES INDICATED

Rev. | Date | By | Description | Rev. | Date | By | Description

Westfield (New Zealand) Limited
L3 cnr REMUERA RD & NUFFIELD ST, New Market, AUCKLAND, New Zealand
Telephone : (09) 978 5050
Fax Num. : (09) 978 5070
Project Architect Mark OakleyChecked

Fletcher Design Group Limited
Architects and Interior Designers
3 Pacific Rise, P.O. Box 9424, Wellington, New Zealand
Tel 04-381 6000 Fax 04-381 6039
Drawn by PR

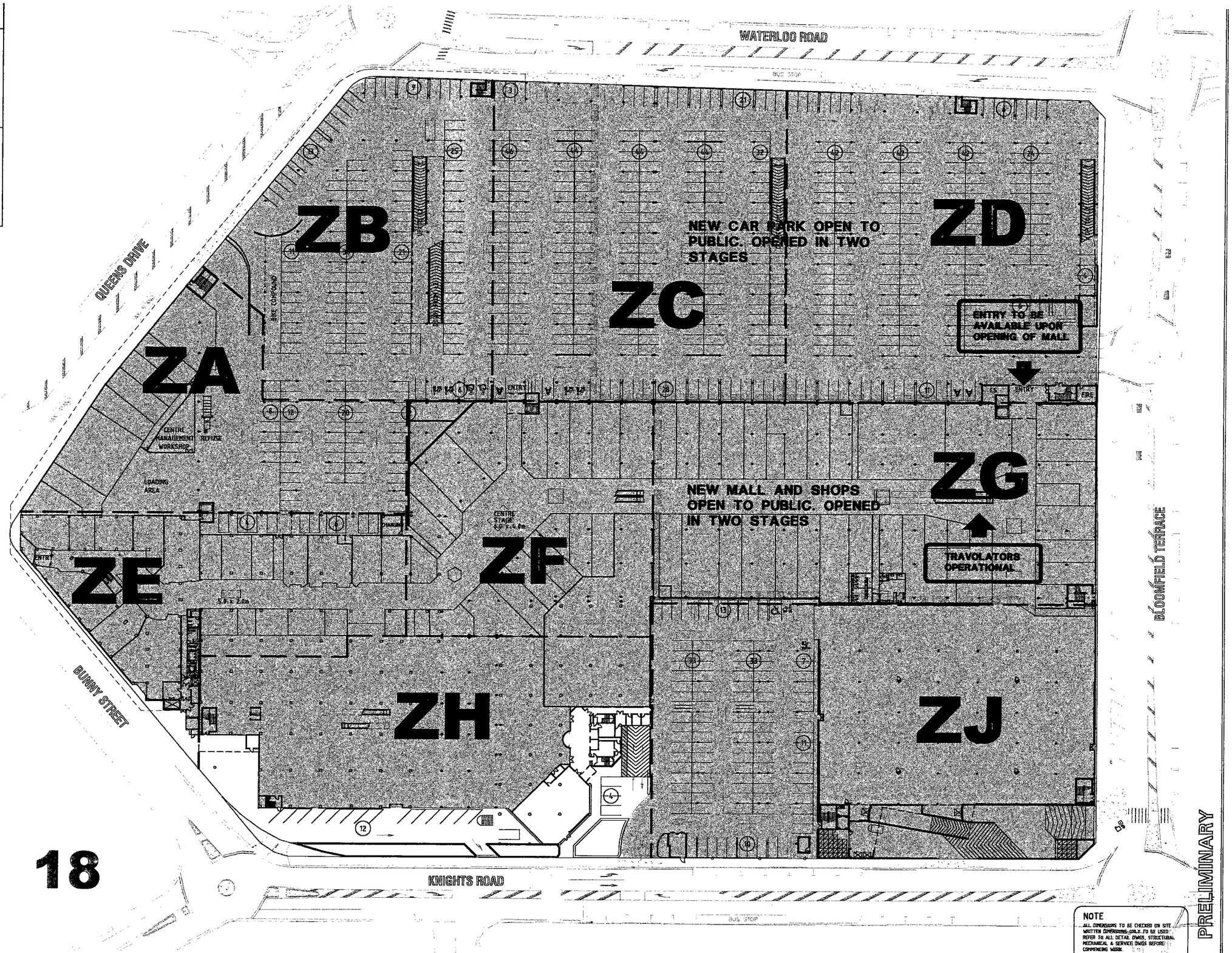
Other Consultants
Structural Engineer
Dean Carter Ballings & Partner Ltd
Tel 04-473 7551 Fax 04-473 7911
Services Engineer
Montgomery Watson NZ Ltd
Tel 04-381 6000 Fax 04-381 6039

Project QUEENSGATE REDEVELOPMENT

Title **LEVEL 1 - MONTH 15**
PROPOSED CONSTRUCTION STAGING PLAN

Scale	Project/Job Number	Computer Ref.	Drawing Number
1:500	01019	L1-MONTH15	STL1-15
Library Ref. J:/QG/STA.	Scheme 35	Date Plotted 02/07/02	Revision 3

(EXCLUDING TROLLEY BAYS) FOR LEVEL :		1
19/06/2002		
EXISTING CARPARKS	=	0
EXISTING DISABLED CARPARKS	=	0
EXISTING PARENT & PRAM CARPARKS	=	0
EXISTING AUTHORITY CARPARKS	=	0
EXISTING TROLLEY BAYS	=	0
TOTAL NUMBER OF EXISTING CARPARKS (EXCLUDING EXISTING TROLLEY BAYS)	=	0
NEW CARPARKS	=	731
NEW DISABLED CARPARKS	=	3
NEW PARENT & PRAM CARPARKS	=	7
NEW AUTHORITY CARPARKS	=	4
NEW TROLLEY BAYS	=	7
TOTAL NUMBER OF NEW CARPARKS (EXCLUDING NEW TROLLEY BAYS)	=	745



MONTH 18

PRELIMINARY

NOTE
ALL DIMENSIONS TO BE CHECKED ON SITE. WRITTEN DIMENSIONS ONLY TO BE USED. REFER TO ALL DETAIL DWGS, STRUCTURAL, MECHANICAL & SERVICE DWGS BEFORE COMMENCING WORK. REFER ANY DISCREPANCIES TO ARCHITECTS.

Rev.	Date	By	Description
1	01/07/02	PR	PRELIMINARY ISSUE
2	05/07/02	PR	AMENDMENTS AS INSTRUCTED BY SD
3	19/11/02	SV	ZONES INDICATED

Rev. | Date | By | Description | Rev. | Date | By | Description

Westfield (New Zealand) Limited
L3 cnr REMUERA RD & NUFFIELD ST, New Market, AUCKLAND, New Zealand
Telephone : (09) 978 5050
Fax Num. : (09) 978 5070
Project Architect Mark OakleyChecked

Drawn by PR

Other Consultants
Structural Engineer: Dave Carter Holmes & Farmer Ltd Tel 04-473 7531 Fax 04-473 3411
Services Engineer: Montgomery Watson NZ Ltd Tel 04-381 6700 Fax 04-381 6739

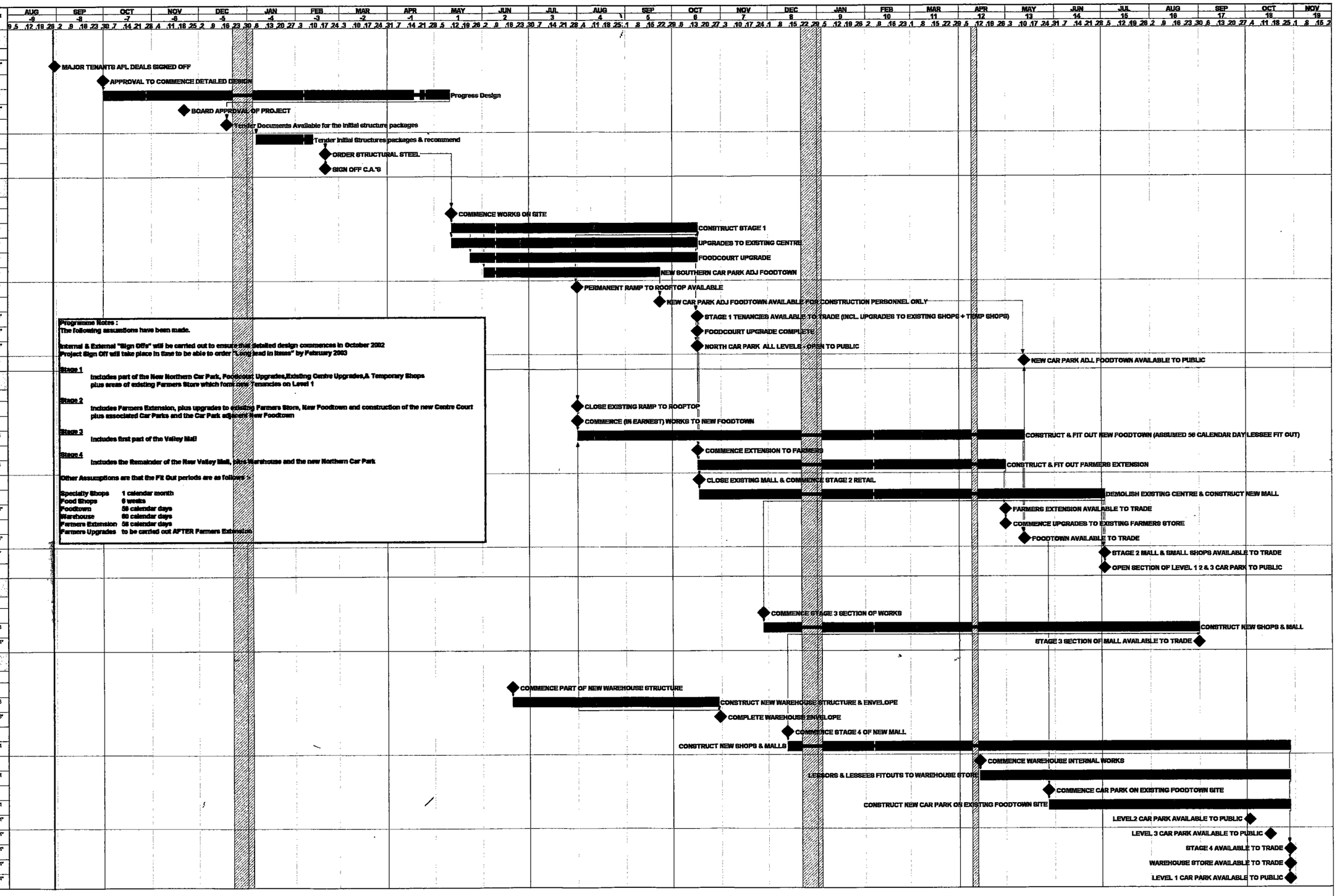
Project: QUEENSGATE REDEVELOPMENT
Title: LEVEL 1 - MONTH 18
PROPOSED CONSTRUCTION STAGING PLAN

Scale	Project/Job Number	Computer Ref.	Drawing Number
1:500	01019	L1-MONTH18	STL1-18
Library Ref. J:/QG/STA..	Scheme 35	Date Plotted 01/07/02	Revision 3

CAD FILE No. J:\QG\Construction Staging\L1 - month 18.dwg - 19/11/02 - 12:01PM

C – Construction Programme

Activity ID	Activity Description	Orig Dur	Planned Start	Planned Finish
Pre Construction Milestones				
Critical Pre construction Activities				
02020	MAJOR TENANTS AFL DEALS SIGNED OFF	0		30AUG02*
01930	APPROVAL TO COMMENCE DETAILED DESIGN	0	01OCT02*	
01980	Progress Design	173	01OCT02	10MAY03
02030	BOARD APPROVAL OF PROJECT	0		21NOV02*
01990	Tender Documents Available	0	19DEC02	
02000	Tender Initial Structures packages & recommend	30	07JAN03	11FEB03
02010	ORDER STRUCTURAL STEEL	0	20FEB03	
02040	SIGN OFF C.A.'S	0	20FEB03	
Stage 1				
Car Park,Foodcourt, Existing Mall - Zone A,B & C				
01550	COMMENCE WORKS ON SITE	0	12MAY03*	
01880	CONSTRUCT STAGE 1	135	12MAY03	16OCT03
01890	UPGRADES TO EXISTING CENTRE	135	12MAY03	16OCT03
01670	FOODCOURT UPGRADE	124	24MAY03	18OCT03
01700	NEW SOUTHERN CAR PARK ADJ FOODTOWN	98	02JUN03	22SEP03
01820	PERMANENT RAMP TO ROOFTOP AVAILABLE	0		31JUL03*
01720	NEW CAR PARK ADJ FOODTOWN AVAILABLE FOR	0	23SEP03	
01580	STAGE 1 TENANCIES AVAILABLE TO TRADE	0		16OCT03*
01600	FOODCOURT UPGRADE COMPLETE	0		16OCT03*
01810	NORTH CAR PARK ALL LEVELS - OPEN TO PUBLIC	0		16OCT03*
02050	NEW CAR PARK ADJ. FOODTOWN AVAILABLE TO PUBLIC	0		12MAY04
Stage 2				
Foodtown, Farmers, & Centre Court - Zone D,E & F				
01830	CLOSE EXISTING RAMP TO ROOFTOP	0	01AUG03*	
01940	COMMENCE (IN EARNEST) WORKS TO NEW FOODTOWN	0	01AUG03	
01940	CONSTRUCT & FIT OUT NEW FOODTOWN	229	01AUG03	12MAY04
01880	COMMENCE EXTENSION TO FARMERS	0	17OCT03*	
01780	CONSTRUCT & FIT OUT FARMERS EXTENSION	153	17OCT03	30APR04
01850	CLOSE EXISTING MALL & COMMENCE STAGE 2 RETAIL	0	18OCT03*	
01950	DEMOLISH EXISTING CENTRE & CONSTRUCT NEW MALL	206	18OCT03	02JUL04
01730	FARMERS EXTENSION AVAILABLE TO TRADE	0		30APR04*
01750	COMMENCE UPGRADES TO EXISTING FARMERS STORE	0	01MAY04*	
01710	FOODTOWN AVAILABLE TO TRADE	0		12MAY04*
01740	STAGE 2 MALL & SMALL SHOPS AVAILABLE TO TRADE	0		02JUL04*
01770	OPEN SECTION OF LEVEL 1 2 & 3 CAR PARK TO PUBLIC	0	03JUL04*	
Stage 3				
Part of New Valley Mall - Zone G				
01760	COMMENCE STAGE 3 SECTION OF WORKS	0	28NOV03	
01810	CONSTRUCT NEW SHOPS & MALL	222	28NOV03	31AUG04
01820	STAGE 3 SECTION OF MALL AVAILABLE TO TRADE	0		31AUG04*
Stage 4				
Valley Mall, Warehouse, Car Park - Zones E,H,J,K				
01780	COMMENCE PART OF NEW WAREHOUSE STRUCTURE	0	20JUN03*	
01860	CONSTRUCT NEW WAREHOUSE STRUCTURE & ENVELOPE	113	20JUN03	29OCT03
01800	COMPLETE WAREHOUSE ENVELOPE	0		30OCT03*
01840	COMMENCE STAGE 4 OF NEW MALL	0	13DEC03	
01850	CONSTRUCT NEW SHOPS & MALLS	259	13DEC03	28OCT04
01830	COMMENCE WAREHOUSE INTERNAL WORKS	0	14APR04	
01870	LESSORS & LESSEES FITOUTS TO WAREHOUSE STORE	170	14APR04	28OCT04
01900	COMMENCE CAR PARK ON EXISTING FOODTOWN SITE	0	28MAY04*	
01970	CONSTRUCT NEW CAR PARK ON EXISTING FOODTOWN SITE	132	28MAY04	28OCT04
01610	LEVEL2 CAR PARK AVAILABLE TO PUBLIC	0		02OCT04*
01620	LEVEL 3 CAR PARK AVAILABLE TO PUBLIC	0		15OCT04*
01860	STAGE 4 AVAILABLE TO TRADE	0		28OCT04*
01880	WAREHOUSE STORE AVAILABLE TO TRADE	0		28OCT04*
01930	LEVEL 1 CAR PARK AVAILABLE TO PUBLIC	0		28OCT04*



Programme Notes :
The following assumptions have been made.

Internal & External "Sign Offs" will be carried out to ensure that detailed design commences in October 2002
Project Sign Off will take place in time to be able to order "Long lead in items" by February 2003

Stage 1
Includes part of the New Northern Car Park, Foodcourt Upgrades,Existing Centre Upgrades,& Temporary Shops plus areas of existing Farmers Store which form new Tenancies on Level 1

Stage 2
Includes Farmers Extension, plus upgrades to existing Farmers Store, New Foodtown and construction of the new Centre Court plus associated Car Parks and the Car Park adjacent New Foodtown

Stage 3
Includes first part of the Valley Mall

Stage 4
Includes the Remainder of the New Valley Mall, plus Warehouse and the new Northern Car Park

Other Assumptions are that the Fit Out periods are as follows :-

Specialty Shops	1 calendar month
Food Shops	6 weeks
Foodtown	56 calendar days
Warehouse	60 calendar days
Farmers Extension	56 calendar days
Farmers Upgrades	to be carried out AFTER Farmers Extension

Project Start	30AUG02	Planned Bar
Project Finish	28OCT04	Progress Bar
Data Date	30AUG02	Critical Activity
Run Date	24SEP02	

© Primavera Systems, Inc.

QEW3

Sheet 1 of 1

WESTFIELD NEW ZEALAND
QUEENSGATE REDEVELOPMENT PROGRAMME
Based upon NO Early Works

FOR DISCUSSION ONLY

Date	Revision	Checked	Approved

D – Construction Traffic Management Report

draft

WESTFIELD SHOPPINGTOWN QUEENSGATE

CONSTRUCTION MANAGEMENT PLAN

Traffic Report

December 2002

Traffic Design Group Ltd

draft

QUALITY ASSURANCE STATEMENT

WESTFIELD SHOPPINGTOWN QUEENSGATE

CONSTRUCTION MANAGEMENT PLAN

TRAFFIC REPORT

Prepared by:	*Richard Galloway* *Traffic Engineer*	_____
Reviewed by:	*Mark Georgeson* *Principal Traffic Engineer*	_____
Approved for Issue by:	*Mark Georgeson* *Principal Traffic Engineer*	_____
Status:	*Draft Traffic Report*	
Date:	13/12/02	

16-850-6169/1
13 December 2002

draft

Mr Paul Wood
Site Manager
Westfield Shoppingtown Queensgate
P O Box 30-884
LOWER HUTT

Dear Sir

WESTFIELD SHOPPINGTOWN QUEENSGATE
Construction Traffic Management Plan

Following on from the earlier Construction Management Plan for Westfield Shoppingtown Queensgate prepared and submitted with Council in March 2001, and the subsequent variations to the proposed development, we have prepared a revised plan of how best to manage traffic and pedestrian activity through the various stages of construction.

This plan is set out by this Traffic Report, and includes details of the necessary parking and pedestrian restrictions, signage, and operational requirements that have been developed with a view to minimising effects to road users, particularly pedestrians.

Overall, the Construction Traffic Management Plan describes a means of ensuring the continued safety and efficiency of the road network throughout construction. Its details are recommended for implementation accordingly.

Yours faithfully
TRAFFIC DESIGN GROUP LTD

Mark Georgeson
PRINCIPAL TRAFFIC ENGINEER

draft

TABLE OF CONTENTS

1. INTRODUCTION 1
2. EXISTING SITE CONDITIONS 2
2.1 Network Characteristics 2
2.2 Traffic Flows 2
3. OVERALL STAGING OF WORKS 3
4. CONSTRUCTION TRAFFIC 4
4.1 Truck Movement 4
4.2 Truck Access 5
5. GENERAL TRAFFIC CONTROLS 6
6. GENERAL PEDESTRIAN MATTERS 6
7. MONTH 1 WORKS 7
7.1 Site Access 7
7.2 The Proposed Kerbside Loading Zone 8
7.3 Pedestrian Management 8
8. MONTH 3 WORKS 9
8.1 Site Access 9
8.2 Pedestrian Management 10
9. MONTH 6 WORKS 10
9.1 Site Access 10
9.2 Pedestrian Management 11
10. MONTH 12 WORKS 11
10.1 Site Access 11
10.2 Pedestrian Management 12
11. MONTH 15 WORKS 12
12. MONTH 18 WORKS 12
13. PARKING FOR CONSTRUCTION WORKERS 13
14. CONCLUSION 13

WESTFIELD SHOPPINGTOWN QUEENSGATE CONSTRUCTION MANAGEMENT PLAN TRAFFIC REPORT

draft

Condition (xxi) of the resource consent approval for Westfield Shoppingtown Queensgate requires the preparation of a Construction Management Plan. This report has been prepared accordingly to address the traffic and pedestrian related aspects of the Plan.

1. INTRODUCTION

The requirement for a Construction Management Plan arises from Condition (xxi) of the resource consent approval for Westfield Shoppingtown Queensgate. That condition reads as follows:

> (xxi) A construction management plan shall be submitted for the approval of the General Manager Customer Service at the time the building consent is submitted. This management plan shall address adverse effects such as noise, dust, traffic and pedestrian effects.

This report examines and describes the traffic and pedestrian related aspects of the Plan. In so doing, the report to follow includes discussion of:

- the existing site conditions
- overall staging of the works
- construction traffic
- traffic controls
- pedestrian matters
- site access and pedestrian management of each of the construction stages
- parking for workers.

The detail of this Traffic Report should be considered alongside the detail of the overall Construction Management Plan and its accompanying diagrams that more fully describes the staging and scheduling of the work.

draft

2. EXISTING SITE CONDITIONS

2.1 Network Characteristics

The various roads surrounding Westfield Shoppingtown Queensgate provide direct connections to the main arterial routes in and out of the Lower Hutt city centre. Appropriate management is needed to ensure that the present level of service and function of these roads is maintained throughout the construction period.

Bunny Street is currently the main public transport node for the valley basin, and the ongoing performance of this public transport facility is obviously important throughout the construction period. It is of particular note in this regard that no provisions for site access or loading are planned to and from Bunny Street, enabling Bunny Street to continue to function in its present arrangement.

The available capacity of the network and the good levels of service offered, provide the flexibility needed to ensure all works and, in particular, the associated movement of all related construction vehicles are able to be absorbed as part of the regular day-to-day functioning of the nearby roadways and intersections.

2.2 Traffic Flows

The existing site is well served by the surrounding road network, with access to and from the valley basin and nearby State Highway provided by appropriately defined routes. Full details of the current level of traffic activity and network performance near the site is well documented in the traffic

assessments submitted respectively with the initial and amended resource consent applications. Figure 2A of the September 2000 Assessment illustrates the existing measured level of traffic flows for both a Thursday evening peak hour and a Saturday daytime peak hour. The larger Saturday flows of that diagram have been reproduced in this report as Figure 1.

draft

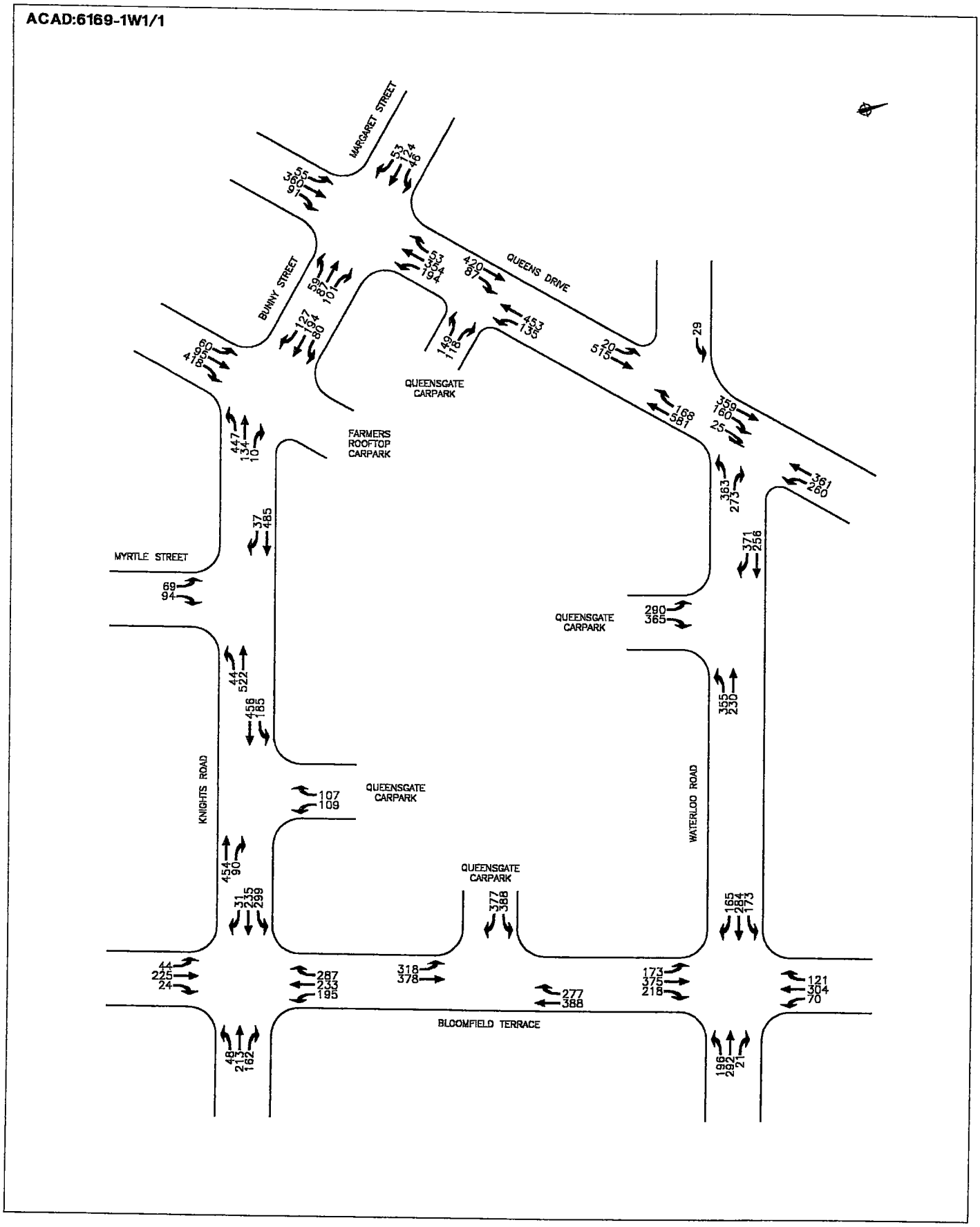
A series of traffic flow predictions are then provided for the same Saturday peak hour in the more recent April 2002 Assessment. That diagram is repeated here as Figure 2.

A comparison between these two diagrams shows flows on the immediately surrounding network increasing by an average of around 30% once the development is complete. Such overall variations are also predicted during other days of the week.

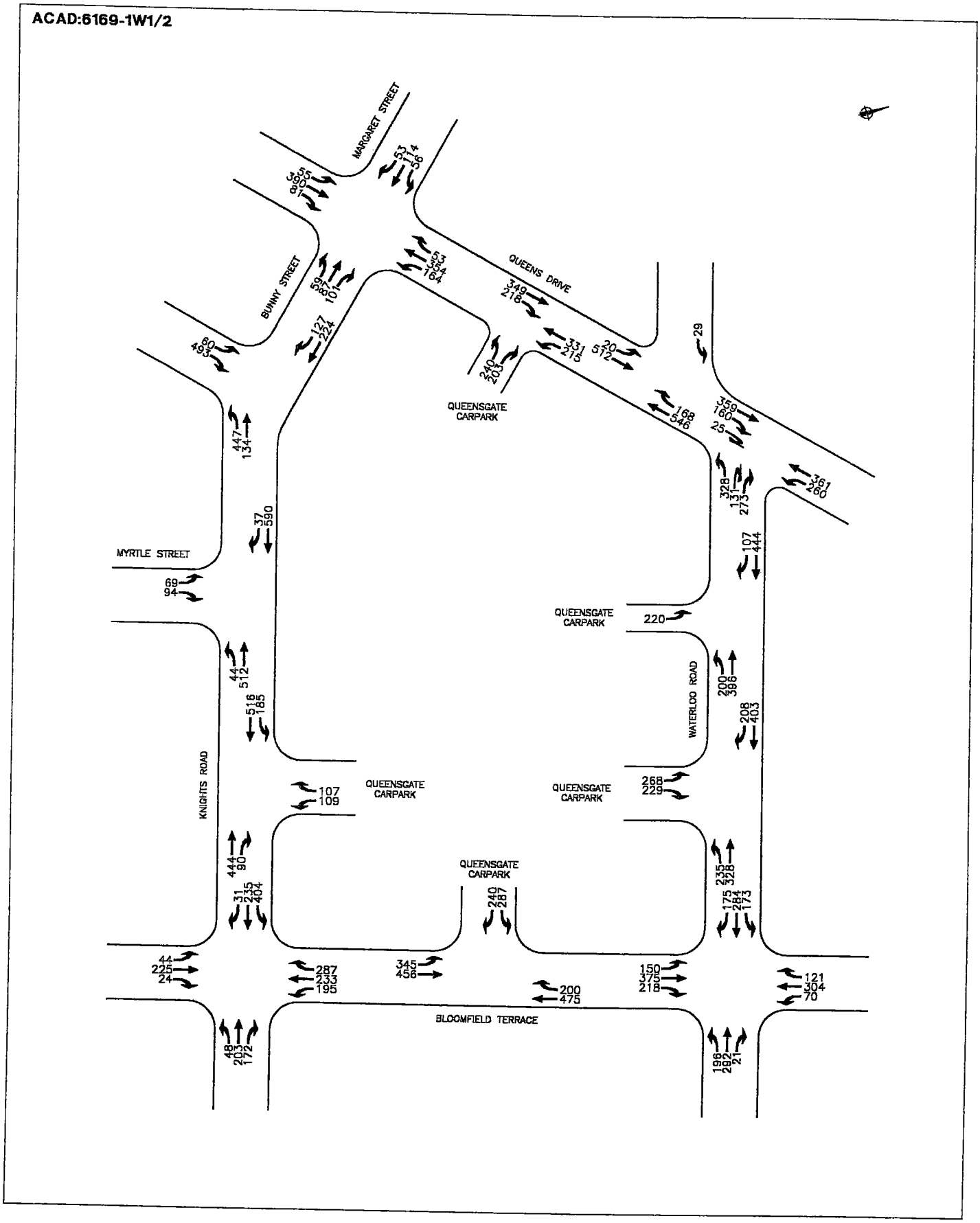
This increase in traffic will be progressive during the construction period and, at times, will involve vehicles associated with works on-site. Because the completed Centre will have a level of generated traffic somewhat larger than that which exists today, and because construction will be progressive, it can be reasonably concluded that traffic generated during the construction stages will represent an addition to the network which is expected to be no greater than that of the completed development.

3. OVERALL STAGING OF WORKS

Broadly, and as a whole, the redevelopment project is planned as five progressive stages of construction chronologically identified by the status of works at Months 1, 3, 6, 12, and 15, with completion of the development timed for Month 18. At this point in time, construction is programmed to begin in the second quarter of 2003, which will see the new Centre being fully operational by the end of 2004. Staging of the works will ensure trading is able to continue while also minimising the impact to customers and users of the surrounding road network.



SATURDAY FLOWS (September 2000 Traffic Assessment) 1



SATURDAY FLOWS
(April 2002 Traffic Assessment)

2

draft

Works associated with the new and expanded shopping complex will include progressive demolition and site clearance of the existing site and buildings as well as construction of the new Centre. The large majority of site works is to be carried out inwardly, with little disruption to vehicular and pedestrian traffic. However, and as would be expected, some elements of the construction process will have an outward effect. It is these effects which are to be managed through the related traffic and pedestrian provisions set out in this report.

The detailed staging of the works involves stages of construction and internal fitout across a series of nine zones. (A through H, and J), which are fully described in the main documentation of the Construction Management Plan. Specific provisions for site access, loading zones and footpath occupations will be necessary during the construction phases.

Construction is planned to begin at the northwestern corner of the site within Zones A and B, followed by Zone J works for the supermarket at the southeastern corner of the site. The central areas of the shopping centre will then be constructed with the final area of works in Zone D at the northeastern corner of the site.

4. CONSTRUCTION TRAFFIC

4.1 Truck Movement

During the course of the various demolition and construction stages, Westfield NZ expects a total of up to around 12 large trucks and an equivalent number of smaller trucks to be generated each day. A further total of around 20 to 25 concrete trucks would visit the site once a week at various stages of the project for the required concrete pours. This volume of heavy vehicle activity is small, will be of a level that remains consistently

below the larger network flows of the completed Centre, and will be able to be absorbed within the available capacity of the surrounding network.

The supply and disposal of materials is expected to mainly occur to and from areas outside the Lower Hutt central city area, typically requiring arriving and departing trucks to travel via State Highway 2. From this position, connections to and from the city centre and the Queensgate site are to be achieved via a route following Melling Bridge, Rutherford Street, and Queens Drive, from which trucks would then circulate the site in an anticlockwise direction along the nearside of each road to gain access to the respective site access points and loading zones. This will facilitate access to and from the adjoining streets via left turns.

4.2 Truck Access

The site of Westfield Shoppingtown Queensgate has frontage to five roads, namely Queens Drive, Bunny Street, Knights Road, Bloomfield Terrace and Waterloo Road. During construction, and with the exception of Bunny Street, site access is planned to be gained from each of these frontage roads at various stages. The progressive staging of works is such that the site access points will be used for a period of up to six to nine months.

Once the requirements for construction access have ceased, and as each stage is completed, redundant access points will be removed and closed.

Each of the access points has been carefully selected to ensure vehicles are able to enter and exit the site safely and in a manner that minimises any potential effects on other road users. It is again noted that all truck movements to and from each access are to be made via left turns.

5. GENERAL TRAFFIC CONTROLS

draft

All aspects of the construction process involving work within the road reserve will meet the standard requirements set out in the City Council's "Specification for Working in the Road", as appropriate. This specification sets Council's requirements for people and organisations wishing to work within the road reserve and has been prepared with a view to ensuring that:

- the City's roading assets are adequately protected and maintained
- the road reserve is safe for all users, including pedestrians.

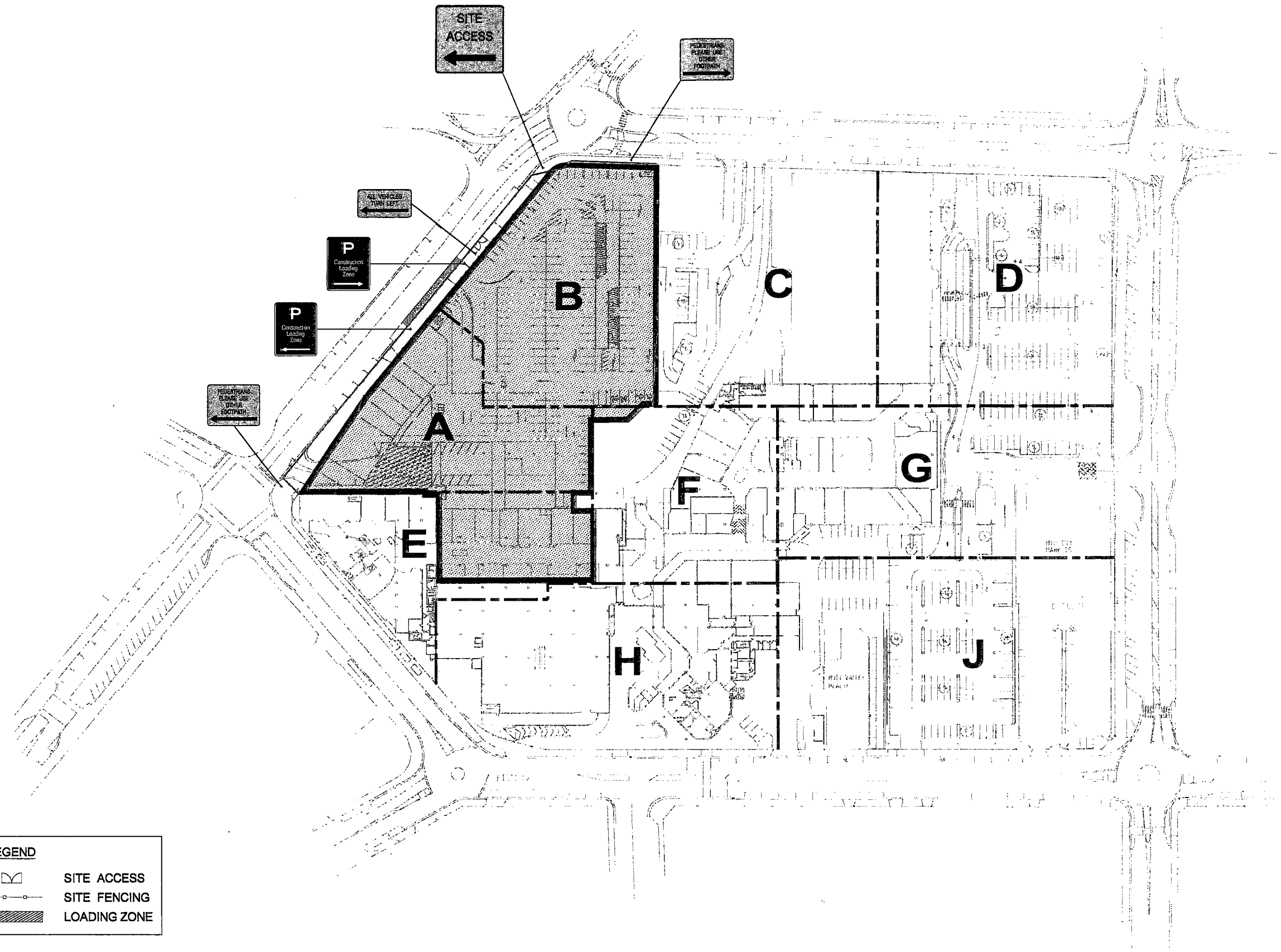
The standard requirements of Transit NZ's "Code of Practice for Temporary Traffic Management" will also be met.

Other specific requirements relating to the particular arrangements for site access, for kerbside loading and for pedestrian movement during the various stages of the project are discussed in Chapters 7 through 11 of this report. Overall, the adoption of best practice will feature highly in all procedures employed by Westfield NZ.

6. GENERAL PEDESTRIAN MATTERS

A feature of the central city location of Westfield Shoppingtown Queensgate is that pedestrians regularly make use of the Queens Drive, Bunny Street, Knights Road, Bloomfield Terrace and Waterloo Road footpath frontages of the site. Specific provisions will be implemented to ensure effects on pedestrian amenity and safety are effectively controlled and minimised. In some instances, and as described through the subsequent chapters of this report, pedestrians will need to be safely directed away from the nearside footpath edges.

Due to the scale of the project, some disruption to the bounding footpaths and pedestrian routes is inevitable. Westfield NZ appreciates that



LEGEND

- SITE ACCESS
- SITE FENCING
- LOADING ZONE

3

ISSUE	DATE	REVISION
A	03/12/02	CREATE FROM WESTFIELDS PLAN – STL1-1. ADD SIGNAGE & ZONING DETAILS FOR L1-MONTH1.

WESTFIELD SHOPPINGTOWN - QUEENSGATE, LOWER HUTT

CONSTRUCTION STAGING - LEVEL 1, MONTH 1

TRAFFIC DESIGN GROUP

DRN. BC	DATE: 03/12/2002	DRG.No
SCALE 1:1500	ORIGINAL SIZE A3	CAD:6169-1M1

pedestrian movement and safety is of key importance in the redevelopment of Westfield Shoppingtown Queensgate and will ensure that all construction zones are secure. Use of secure site fencing and signage as described next will ensure pedestrians walking near and around the site are properly informed and clearly guided during all construction stages. It is currently planned that all site fencing would take the form of standard site fencing panels of approximately 1.8m in height, joined together and covered with shadecloth netting.

draft

A minimum footpath width of 1.8m is to be provided in areas where pedestrian routes are to be maintained. This width has been required by Council as the minimum acceptable footpath width. If this minimum width cannot be achieved, then pedestrians will be directed along other safe routes.

7. MONTH 1 WORKS

The initial works extending from the first month of development will involve construction within Zones A and B which together incorporate the area of the existing carpark in the northwestern corner of the Queensgate site, Queensgate Road, and the various buildings fronting both Queensgate Road and Queens Drive.

7.1 Site Access

One vehicle access point is to be provided on Queens Drive during this phase of construction, involving a new temporary crossing positioned within the northern end of the existing kerbside taxi rank on Queens Drive, as illustrated by the detail of Figure 3.

With a view to minimising the impact of vehicles moving to and from this site access, all movements are to be managed and controlled via left turns, with black-on-orange signage as also indicated by Figure 3.

7.2 The Proposed Kerbside Loading Zone

draft

Figure 3 also shows the proposed introduction of a 30m long loading zone along the nearside kerb of Queens Drive. The provision of a kerbside loading zone in this position will facilitate the unloading of construction materials by crane to all upper levels of the development site. Such needs cannot be met on-site.

This particular feature of overall construction is proposed to exist for the first six months until Zones A and B are complete. It is proposed that the kerbside zone be formally signed as a Construction Loading Zone with white-on-blue signs, as also indicated in Figure 3.

The loading zone and site access will effectively replace the existing taxi rank on Queens Drive for the first six months of construction, following which it is intended that a taxi rank be permanently reinstated at this kerbside position. Various previous discussions with Council and taxi operators have identified the practicality of temporarily relocating this taxi rank in two separate parts to the western kerb of Queens Drive adjacent to the ANZ Bank and to the southern kerb of Waterloo Road between the two existing driveways to the site.

7.3 Pedestrian Management

With the introduction of this kerbside loading zone, and the erection of fencing along the edge of Construction Zones A and B, pedestrians will need to be directed away from the Queens Drive footpath at its nearby intersections with Waterloo Road and Bunny Street. Formal pedestrian facilities already exist at these two intersections to enable pedestrians to safely cross Queens Drive to the opposite footpath.

Along Waterloo Road, pedestrians will be able to continue to use the nearside footpath, as the fencing to be erected in this instance will follow the site boundary.

Black-on-orange signs as shown in Figure 3 will safely direct pedestrians to alternative footpaths.

draft

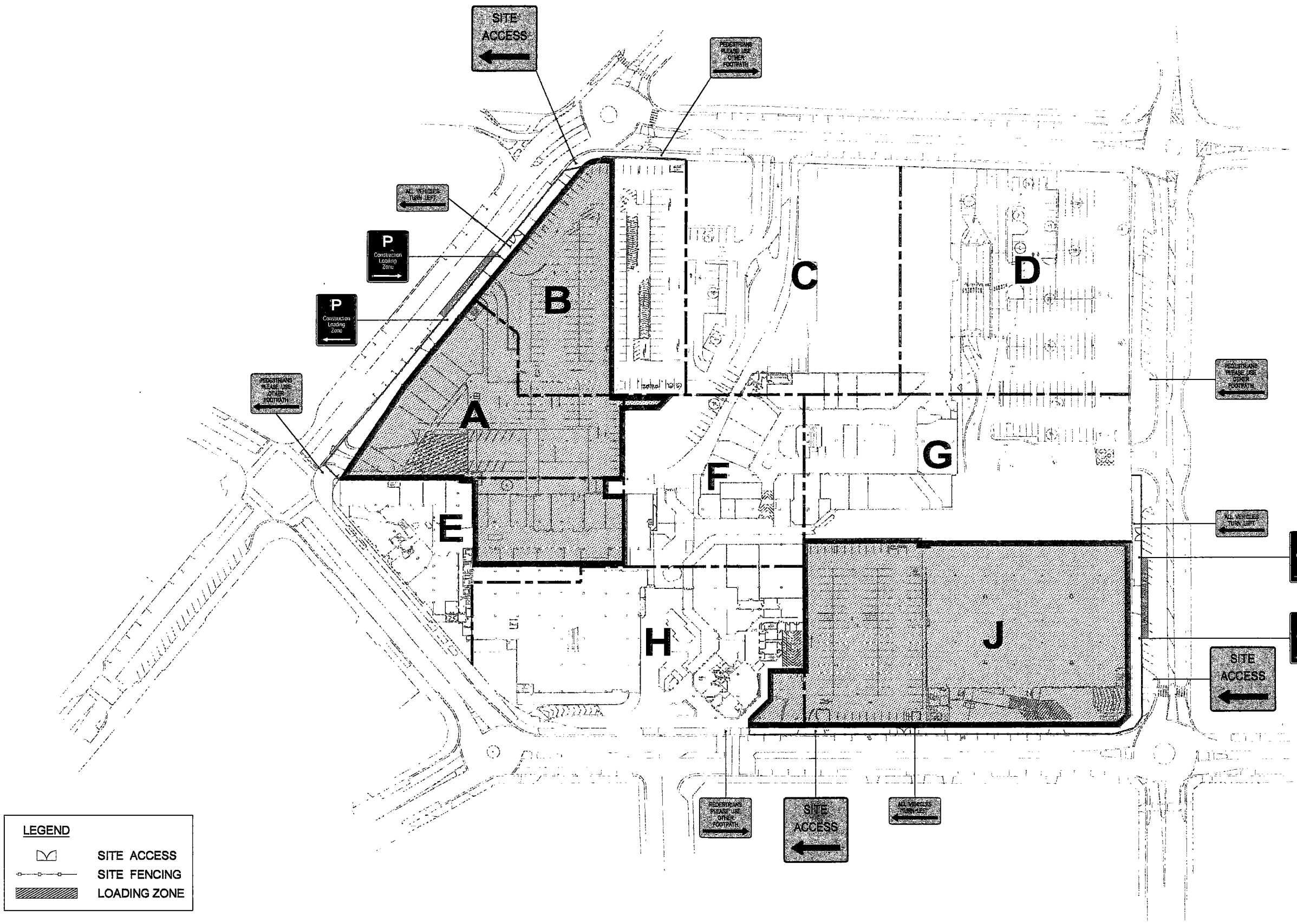
8. MONTH 3 WORKS

Works in Zones A and B will continue through the period of the next three months, with site access and pedestrian provisions as described above in respect of Month 1. By this stage, it is planned that the new vehicle ramp connections to Level 2 in Zone B would be completed, and available for use, as indicated by the yellow shading in Figure 4.

The third month will also see the commencement of works in Zone J at the corner of Bloomfield Terrace and Knights Road, and demolition of the existing vehicle ramp and rooftop parking structure. Access to the remaining upper level parking will then be achieved via the new ramps in Zone B and a temporary bridge link to be constructed across to the existing areas of carparking. The existing one-way access ramp from Knights Road will remain.

8.1 Site Access

Access to Zone J is proposed to be achieved via temporary driveway connections to each of Bloomfield Terrace and Knights Road. Both site accesses will be situated well clear of the Bloomfield Terrace/Knights Road intersection to ensure the operation of the roundabout is not compromised. Left turn access and egress arrangements will be signed as indicated in Figure 4.



4

ISSUE	DATE	REVISION
A	03/12/02	CREATE FROM WESTFIELDS PLAN – STL1–1. ADD SIGNAGE & ZONING DETAILS FOR L1–MONTH3.

WESTFIELD SHOPPINGTOWN - QUEENSGATE, LOWER HUTT

CONSTRUCTION STAGING - LEVEL 1, MONTH 3

TRAFFIC DESIGN GROUP

DRN. BC	DATE: 03/12/2002	DRG.No
SCALE 1:1500	ORIGINAL SIZE A3	CAD:6169–1M3

8.2 Pedestrian Management

draft

Site fences are to be erected along the outer edge of the footpaths along each of the Bloomfield Terrace and Knights Road frontages of this zone to protect pedestrians and other road users from the effects of on-site works. In this instance, pedestrians are to be directed away from the nearside footpaths to opposite footpaths through the use of signage located as also shown in Figure 4.

It is noted in this regard that good facilities already exist for pedestrians to cross both Knights Road and Bloomfield Terrace at the signalised crossing near Myrtle Street, at the Knights/Bloomfield roundabout and at the Bloomfield/Waterloo roundabout. It is considered that pedestrians would best be directed across Bloomfield Terrace in the location shown, where kerb cut-downs already exist.

9. MONTH 6 WORKS

Construction work within Zones A and B will be completed by Month 6, with works continuing in Zone J and also extending into Zones F, G and H in the centre of the site. The internal fitout and alterations to the section of Zone E fronting Bunny Street will also be commenced at Month 6.

9.1 Site Access

The completion of Zones A and B will enable the site access and loading zone on Queens Drive to be removed, and the taxi stand to be reinstated along this frontage. The site access and loading zone requirements of Month 3 for Bloomfield Terrace will continue at Month 6.

Access to the construction area of Zone H and the demolition of the existing one-way ramp adjoining Farmers will require access to an on-site loading area that is to be accessed from a driveway at the intersection of Bunny

Street and Knights Road, with exits handled via a separate driveway connection back to Knights Road.

Again, access to and from these crossing points will be managed via left-turns as indicated by the black-on-orange signage shown in Figure 5.

draft

9.2 Pedestrian Management

While the Queens Drive footpath will be reopened by Month 6, the requirements along Bloomfield Terrace and Knights Road from Month 3 will remain. Figure 5 again illustrates these arrangements.

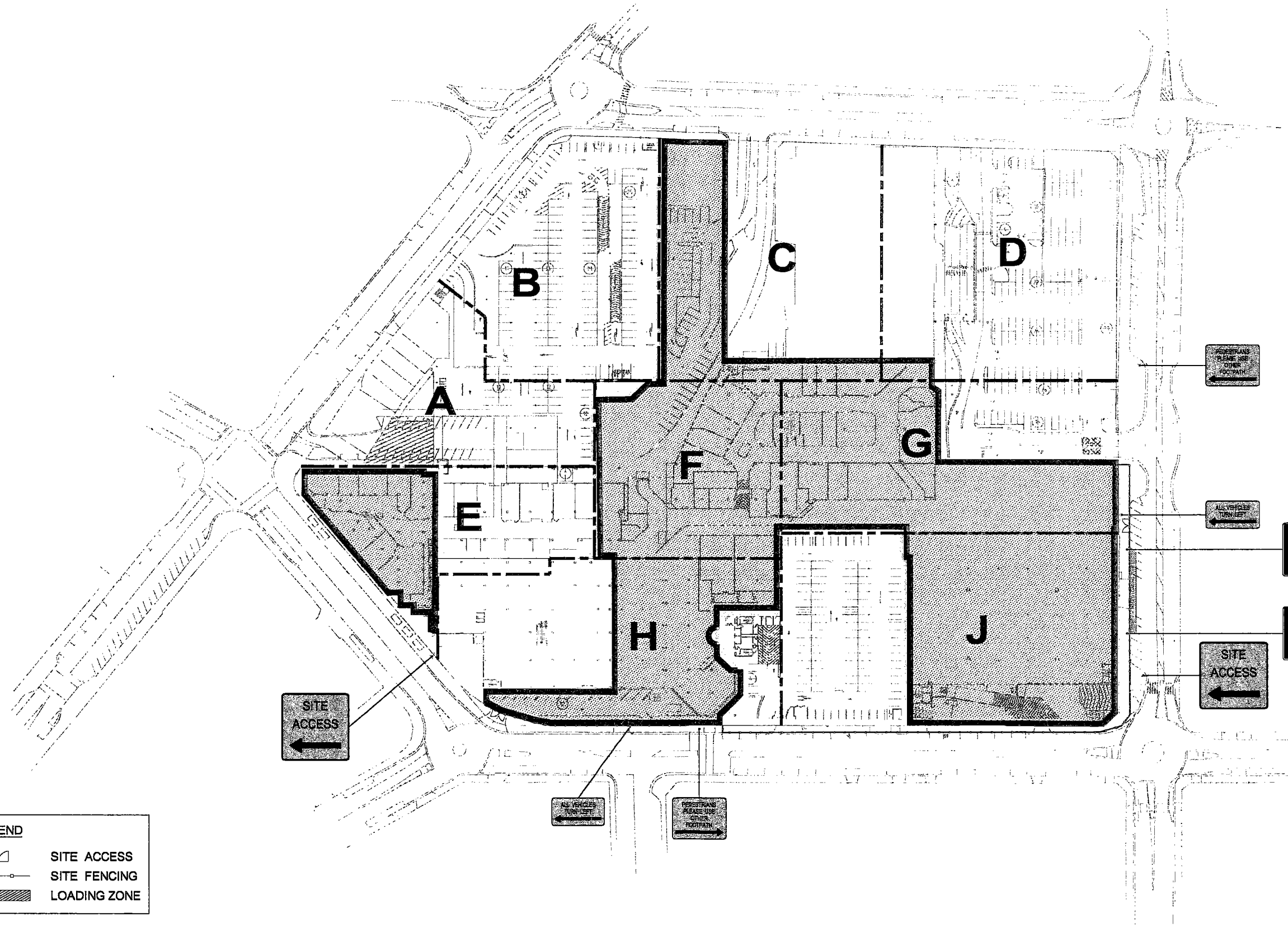
10. MONTH 12 WORKS

By Month 12, Zones A, B, E, H and J will all be complete, including the new supermarket. Construction will be continuing in Zones F and G and commencing in Zones C and D, involving demolition of the existing Foodtown supermarket, its loading dock area and the building at the corner of Waterloo Road and Bloomfield Terrace.

10.1 Site Access

Figure 6 shows that access to the combined construction areas of Zones C and D is planned to be achieved via two new crossing points located along the Waterloo Road frontage of the construction area, which will be used alternately as construction progresses along the edge of Waterloo Road. The western access point will essentially replace the access to the then-redundant Foodtown loading dock.

At this time, and as shown, construction access will no longer be required to and from Knights Road, but the access point on Bloomfield Terrace will continue to be used in Month 12.



5

ISSUE	DATE	REVISION
A	03/12/02	CREATE FROM WESTFIELDS PLAN – STL1-1. ADD SIGNAGE & ZONING DETAILS FOR L1-MONTH6.

WESTFIELD SHOPPINGTOWN - QUEENSGATE, LOWER HUTT

CONSTRUCTION STAGING - LEVEL 1, MONTH 6

TRAFFIC DESIGN GROUP

DRN. BC	DATE: 03/12/2002	DRG.No
SCALE 1:1500	ORIGINAL SIZE A3	CAD:6169-1M6

10.2 Pedestrian Management

In this instance, pedestrians are to be directed away from the southern footpath of Waterloo Road via the facilities available at its intersection with Queens Drive.

The restrictions on the Bloomfield Terrace footpath will also be extended, with site fencing to be erected along the full length of Bloomfield Terrace, with pedestrians directed to the opposite footpath. The Knights Road footpath will be reopened by Month 12.

These pedestrian provisions are as also indicated by the detail of Figure 6.

11. MONTH 15 WORKS

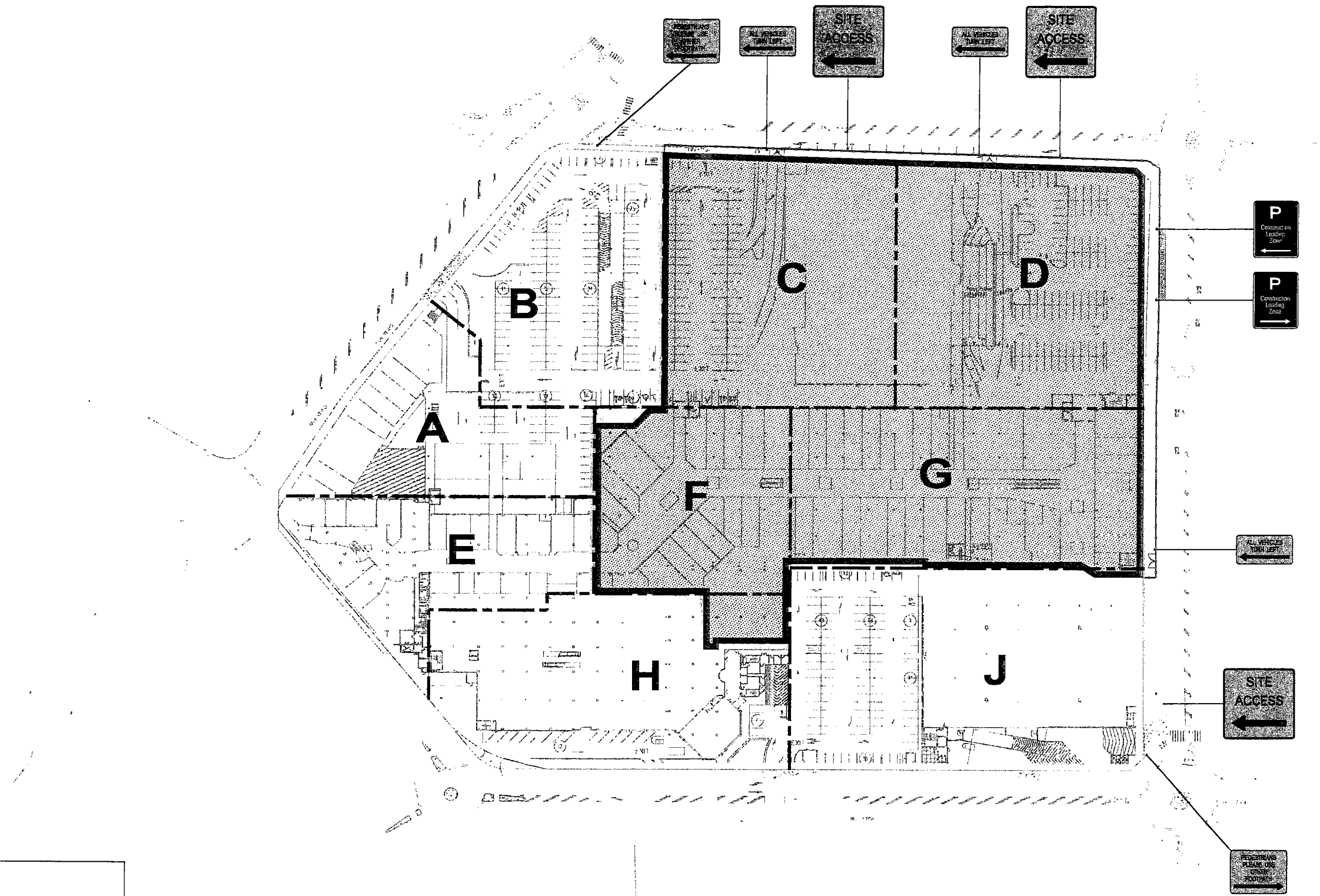
By Month 15 most of the shopping centre will be complete with the final areas of carparking in Zones C and D and shops in Zone G being opened progressively over the following three months. Accordingly, the site access and pedestrian management provisions will initially continue on Waterloo Road and Bloomfield Terrace, with the exception of the western site access on Waterloo Road which will no longer be required. The arrangements are shown at Figure 7.

Each of the site accesses, loading zones, and footpath restrictions will be discontinued as completion of construction allows.

12. MONTH 18 WORKS

Construction of Westfields Shoppingtown Queensgate is expected to be complete 18 months after the commencement of works, with all the shops and parking areas fully operational and open to the public.

The detail of the completed layout is illustrated by Figure 8.



LEGEND

- SITE ACCESS
- SITE FENCING
- LOADING ZONE

6

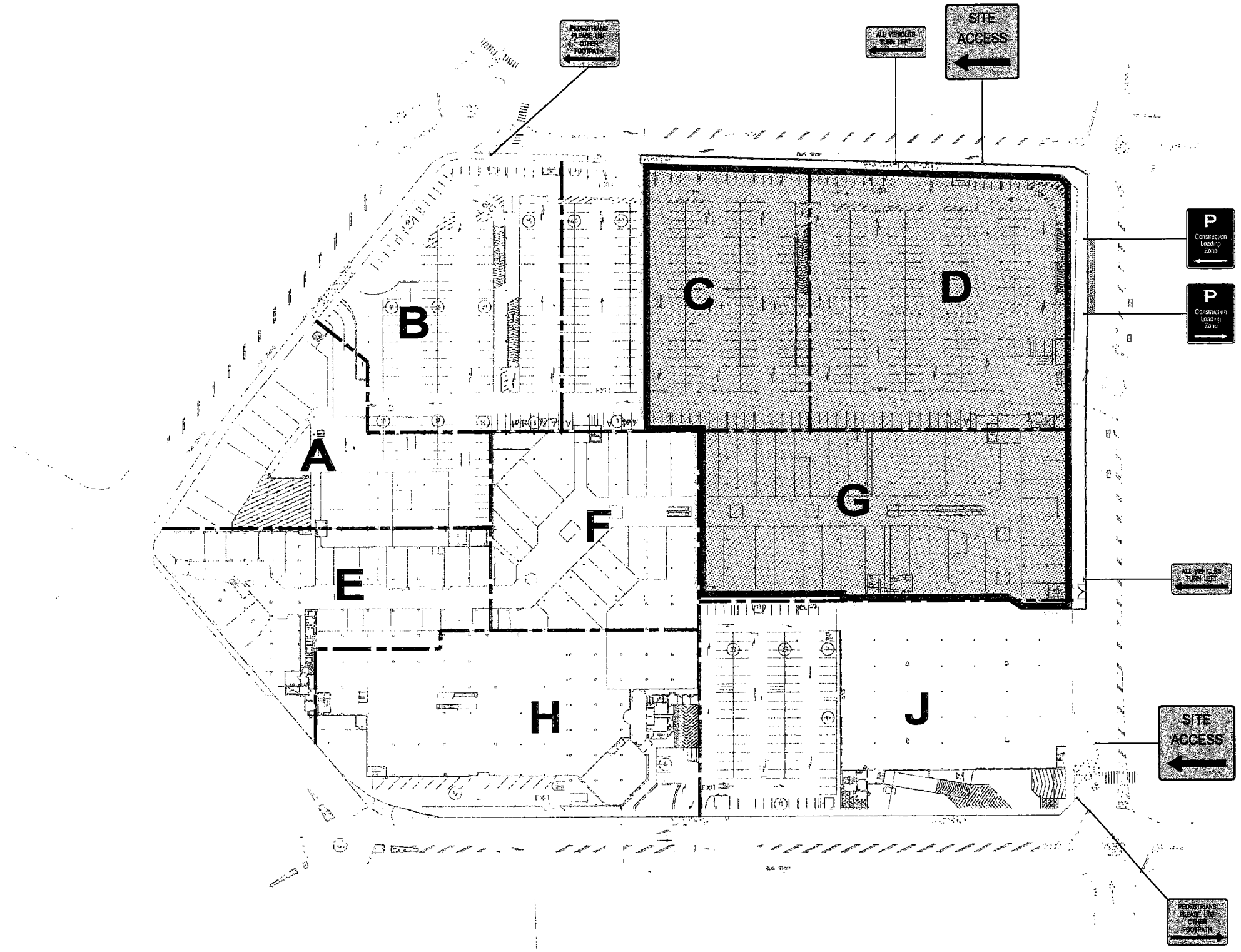
ISSUE	DATE	REVISION
A	03/12/02	CREATE FROM WESTFIELDS PLAN – STL1–1. ADD SIGNAGE & ZONING DETAILS FOR L1–MONTH12.

WESTFIELD SHOPPINGTOWN - QUEENSGATE, LOWER HUTT

CONSTRUCTION STAGING - LEVEL 1, MONTH 12

TRAFFIC DESIGN GROUP

DRN. BC	DATE: 03/12/2002	DRG.No
SCALE 1:1500	ORIGINAL SIZE A3	CAD:6169–1M12



LEGEND

- SITE ACCESS
- SITE FENCING
- LOADING ZONE

7

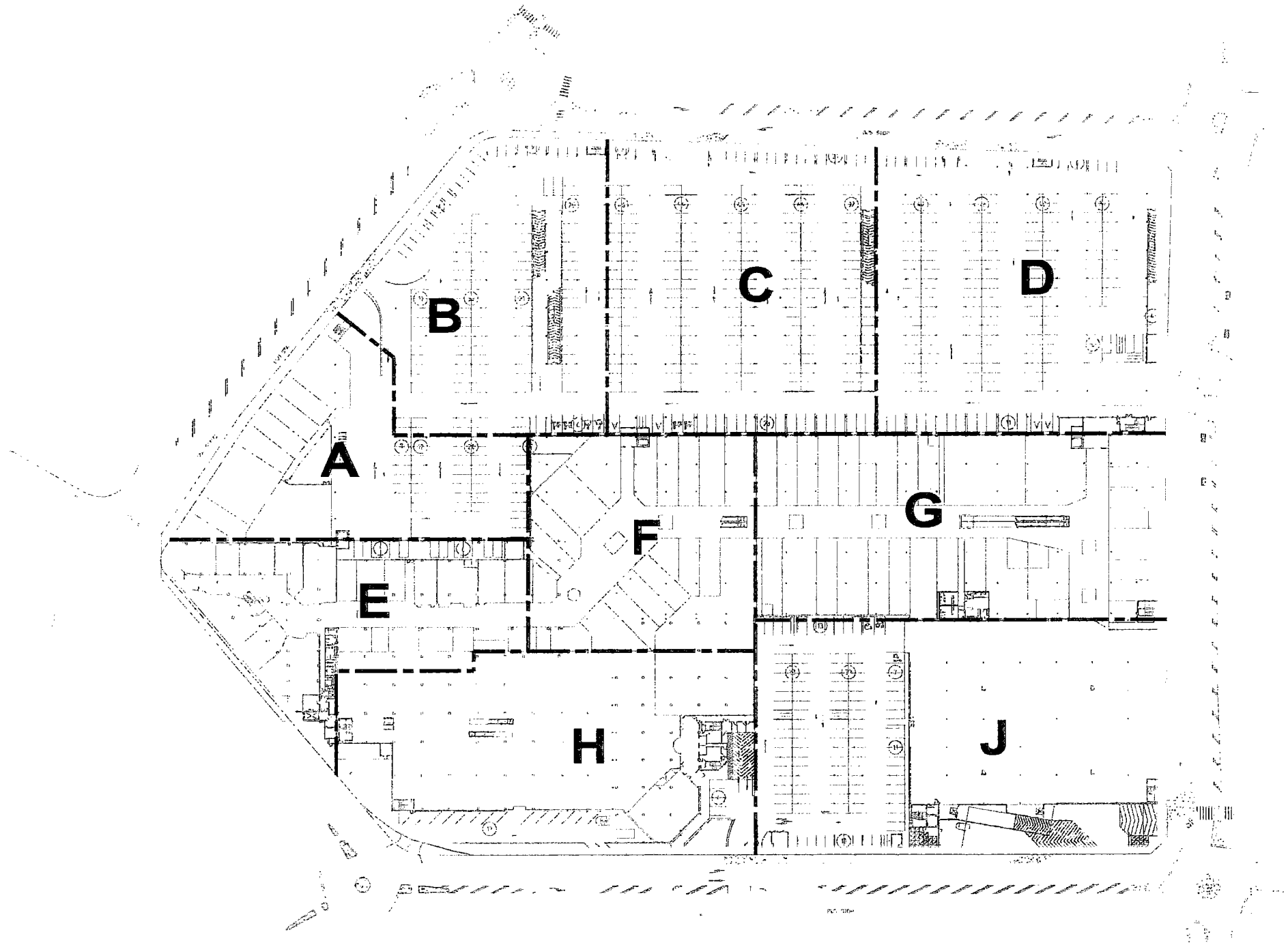
ISSUE	DATE	REVISION
A	03/12/02	CREATE FROM WESTFIELDS PLAN – STL1–1. ADD SIGNAGE & ZONING DETAILS FOR L1–MONTH15.

WESTFIELD SHOPPINGTOWN - QUEENSGATE, LOWER HUTT

CONSTRUCTION STAGING - LEVEL 1, MONTH 15

TRAFFIC DESIGN GROUP

DRN. BC	DATE: 03/12/2002	DRG.No
SCALE 1:1500	ORIGINAL SIZE A3	CAD:6169–1M15



8

ISSUE	DATE	REVISION
A	03/12/02	CREATE FROM WESTFIELDS PLAN – STL1–1. ADD SIGNAGE & ZONING DETAILS FOR L1–MONTH18.

WESTFIELD SHOPPINGTOWN - QUEENSGATE, LOWER HUTT

CONSTRUCTION STAGING - LEVEL 1, MONTH 18

TRAFFIC DESIGN GROUP

DRN. BC	DATE: 03/12/2002	DRG.No
SCALE 1:1500	ORIGINAL SIZE A3	CAD:6169–1M18

13. PARKING FOR CONSTRUCTION WORKERS

draft

There will be no on-site parking for sub-contractors and tradesmen. Rather, the project will be managed such that the large majority of workers will be required to park elsewhere. It is intended in this regard that use be made of the vast area of available parking within the Riverbank Carpark off Rutherford Street.

Westfield NZ expects around 100 and up to 150 construction workers will require remote parking. Inspections and counts show that the Riverbank Carpark has plenty of available capacity to accommodate such an additional level of parking demand.

14. CONCLUSION

The successful adoption and implementation of the traffic and pedestrian related details of the Construction Management Plan set out in this report will ensure minimal effect on all road users, including pedestrians.

It is therefore recommended that the traffic management measures identified in this report be approved for implementation.

Traffic Design Group Ltd
December 2002

E – Noise Report

HEGLEY ACOUSTIC
CONSULTANTS

WESTFIELD NEW ZEALAND

QUEENSGATE CENTRE

LOWER HUTT

CONSTRUCTION NOISE EFFECTS

Prepared for:
Westfield New Zealand Ltd
March 2001 – 5639

Environmental & Industrial Noise Control Engineering
355 MANUKAU RD, P.O BOX 26-283, AUCKLAND 3.
TEL 09 520 5358 FAX 09 638 8497 EMAIL hegley@acoustics.co.nz

CONTENTS

1 Introduction

2 Project Objective

3 The Proposal

4 Design Requirements

5 Identification of Construction Noise

6 Construction Noise

7 Existing Noise Environment

8 Conclusions

1 Introduction

It is proposed to redevelop the existing Queensgate Centre, which is located on the site bounded by Knights Road, Bloomfield Terrace, Bunny Street and Waterloo Road in Lower Hutt.

This report has been prepared to set out the approach adopted and techniques to be employed in order to ensure that the construction noise from the proposed development of the Queensgate Centre will achieve the design criteria for the neighbours.

The principal issues that will be addressed in this document are.

- Identification of the noise criteria which will be applicable to this project.
- Formulation of a strategy for construction to comply with the criteria identified in the above point.
- Development of a monitoring programme to measure and regulate noise at all potentially affected locations.
- Establishment of direct communication networks between affected groups, the City Council and Westfield Design and Construction.

2 Project Objective

The objective of this report is to illustrate the processes by which noise sources will be identified and quantified and to promote management strategies to minimise noise emissions from the construction work associated with this project and assist in maintaining a satisfactory noise environment around the site. This document forms the basis for the future management of noise on the site.

3 The Proposal

The proposed redevelopment of the existing mall will provide a facility that includes multilevel retail shopping, associated car parking and a cinema complex. This assessment of the construction noise considers noise from the proposal on the surrounding properties.

4 Design Requirements

Hutt City Council's Proposed District Plan provides the design requirements for the proposal based on the zoning of the site of the proposed redevelopment and the zoning of the sites that surround it.

The site of the proposed redevelopment is zoned as a Central Commercial Activity Area in the Proposed District Plan. To the south of the proposal across Knights Road, and to the east of Myrtle Street the land is zoned residential. All remaining sites that surround the proposed redevelopment are zoned as Central Commercial Activity Area.

Rule 14C 2.1.2 of the Proposed District Plan sets the following noise rules to be complied with:

14C 2.1.2 Central Commercial Activity Area & Petone Commercial Activity Areas 1 & 2

(a) All activities must not exceed the conditions as specified, measured anywhere within a residential activity area –

Maximum 60dBA	7:00am – 10:00pm (Sun 9:00am – 4:00pm)
Maximum 45dBA	10:00pm – 7:00am

(b) All activities must not exceed 65dBA, measured at the boundary of the site on which the activity takes place. This condition applies for a 24 hour period.

Rule 14C 2.1.13 of the Proposed District Plan is relevant to the proposal and is shown below:

(a) These rules are without prejudice to the powers of Council pursuant to the Act

(b) These rules are without prejudice to the powers of any Medical Officer of Health pursuant to the Health Act 1956.

(c) The noise levels shall be measured in accordance with NZS6801:1991 "Measurement of Sound", and assessed in accordance with NZS6802:1991 "Assessment of environmental Sound". The noise level is the L_{10} descriptor, as defined in NZS6801:1991.

(d) The lower levels shall apply between the commencement of the lower level on a Saturday evening and Monday morning, and Public Holidays, unless otherwise specified.

(e) The maximum sound level shall not exceed L_{max} 75dBA during the hours 10:00pm – 7:00am measured anywhere within a residential activity area.

(f) All construction, demolition and maintenance work shall comply with NZS6803P "Measurement and Assessment of Noise from Construction, Maintenance and Demolition Work".

(g) Sirens being used in response to an emergency (and routine testing and maintenance) are exempt from the Permitted Activity Condition standards.

Table 1 of NZS 6803P:1984 The Measurement and Assessment of Noise from Construction, Maintenance, and Demolition Work, referred to in part (f) of the above rule, sets the following construction noise levels that must be complied with at a point 1m from any residential building where the construction noise is present for more than 18 weeks.

Time	Weekdays			Saturdays		
	L_{10}	L_{95}	L_{max}	L_{10}	L_{95}	L_{max}
0630-0730	55	40	65	-	-	-
0730-1800	70	55	85	70	55	85
1800-2000	65	50	80	-	-	-

For all periods not specified NZS6802 shall apply. This means a level of 45dBA L_{10} should be adopted.

Table 1. Recommended Upper Limits for Levels of Construction Work Noise Received in Residential Areas

Table 2 of the Construction Noise Standard sets the construction noise levels that must be complied with at a point 1m from any business building

Time period	Noise Levels (dBA)	
	L_{10}	L_{95}
0730 - 1800	70dBA	55 dBA
1800 - 0730	75 dBA	NA

Table 2. Recommended Upper Limits (dBA) For Levels of Construction Work Noise for Industrial or Commercial Areas for all Days of the Year

This report has been based on the construction period for the proposal exceeding 18 weeks in duration. In accordance with Rule 6.1.2 of NZS 6803P:1984 The Measurement and Assessment of Noise from Construction, Maintenance, and Demolition Work, the levels shown in Tables 1 and 2 above include a –5dBA correction.

5 Identification of Construction Noise

An essential component of the analysis is the consideration of the site in its business and residential environment, identification of appropriate demolition, excavation and construction methodologies, assessment of probable noise source based on experience in the management of major development sites and the recommendation of management strategies to minimise noise emissions as best as practicable.

The flow chart attached illustrates the detailed process, which will be followed in excavation and construction activities. The flow chart will be followed in the period prior to construction to establish the optimum methodologies equated with minimising noise emission and again, during the construction process itself, as a way of managing noise related issues as they arise.

6 Construction Noise

The assessment of construction noise for the proposal has been based on a series of measurements that are currently being undertaken for a similar shopping complex development in the Auckland area. The measurements of construction noise that have been undertaken have included noise from concrete trucks and pumps, a truck mounted crane, tower crane, excavators, angle grinders, pneumatic jack hammers, steel fabrication and general construction noise and will represent the noisier construction activities of the proposal.

Using this measurement base, construction noise levels at the assessment point, as set out in the Construction Standard, of 1m from the façade from the residential and commercial properties that surround the site will typically vary between 62 and 70dBA L_{10}. These levels are based on the construction activities occurring near to the site boundary of the proposed redevelopment and will reduce for periods when construction is taking place further inside the site boundary.

Based on the previous measurements, the L_{95} construction noise level will be well below the 55dBA requirement for Residential Zones. The L_{max} noise level will range between 79 and 84dBA at 1m from the façade of the buildings.

The predicted construction noise levels comply with the requirements of Tables 1 and 2 of the Construction Noise Standard for the following periods:

Residential Area	0730 – 1800hrs	Monday to Saturday
Central Commercial Activity Area	24 hours per day	Monday to Sunday

The assessment of construction noise in this report has been undertaken in accordance with the 1984 edition of the Construction Noise Standard as required by the Proposed District Plan. The Construction Noise Standard was revised in 1999, but re-assessment of the proposal under the new Standard does not result in any changes to the findings of this report.

7 Existing Noise Environment

In order to show the effects of the proposed construction activities a series of 24 hour noise survey are to be undertaken immediately after the temporary noise effects of cicadas has stopped. This will be as soon as the temperature drops; expected to be by the end of March. Four sites are proposed to be measured, one on each side of the proposed development. On completion of these measurements this report will be updated to reflect the findings of those measurements.

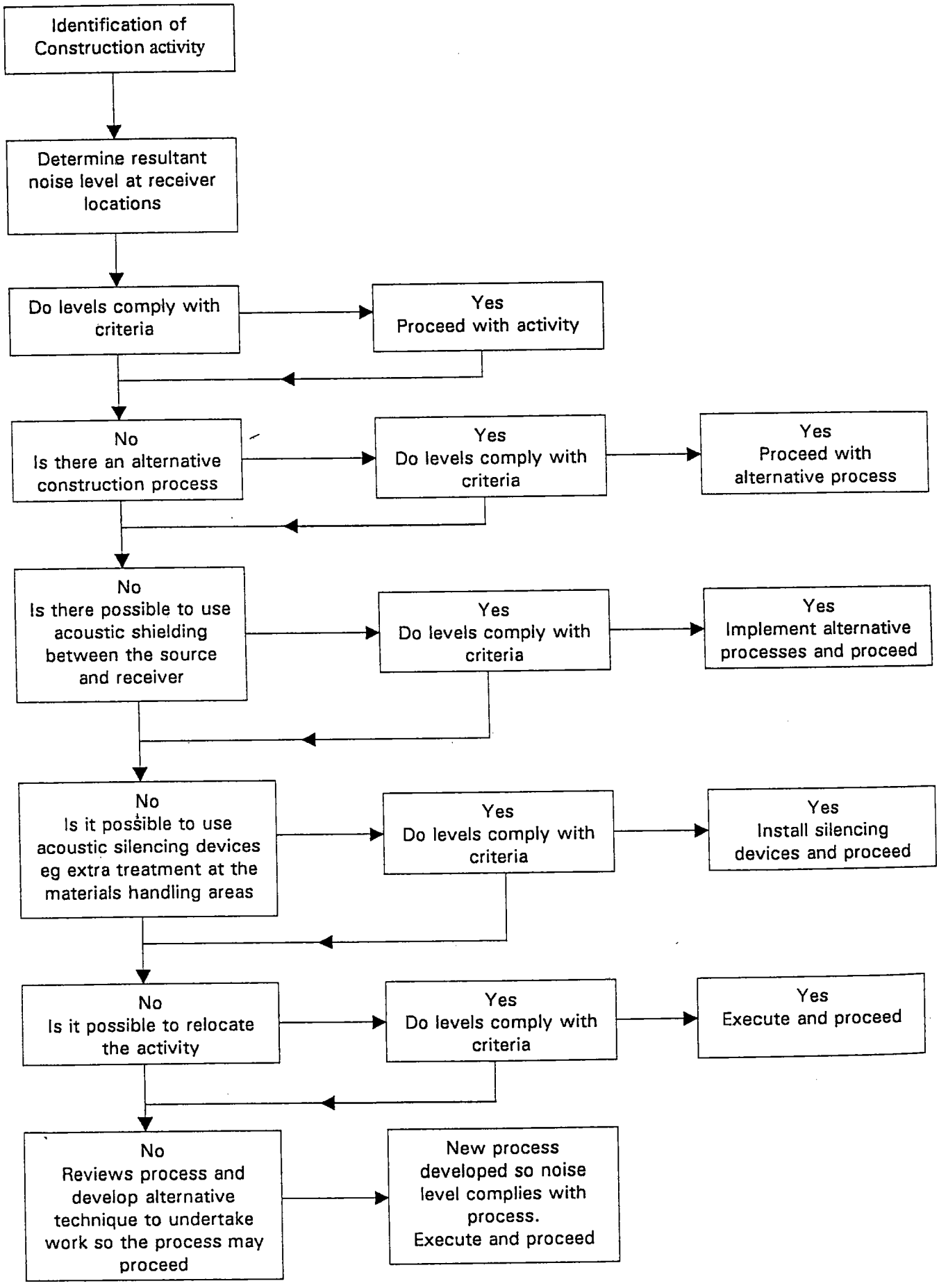
8 Conclusions

Noise surveys currently being undertaken for a building site similar to that of the proposal, confirm that construction of the proposal can be undertaken in accordance with the construction noise requirements of the Proposed District Plan.

Based on the above, the proposed redevelopment will have no more than a minor effect for the neighbouring residents and the commercial properties.

Nevil Hegley

CONTROL OF NOISE



F – Fire Report

Queensgate Redevelopment
Staging of Works
Fire Safety Compliance

1 Introduction

This report has been developed to give an overview of the proposed fire safety precautions to be taken during the redevelopment of the Queensgate Shopping Centre in Lower Hutt.

The details are based on the proposed construction staging plans prepared in July 2002 and will be subject to variation depending on the final construction programme. This applies especially to the temporary tenancies which are still being designed.

This report should be read in conjunction with the staged construction fire egress plans.

2 Means of Egress

Means of egress is described progressively outlining the changes in egress paths at each stage of the development from the current layout to the final completed mall. Calculations for egress are based on the methods described in the Fire Engineering Design Guide by CAE in Canterbury, and egress has been designed to keep evacuation times to less than 5 minutes as suggested by the NZBC Acceptable Solution C/AS1.

3 Fire Safety Precautions

All areas of the building require sprinkler protection when they are occupied by the public. This report outlines valveset arrangements and areas of coverage but details such as primary pipe routes will be developed during final design.

4 Month 1

4.1 Means of Egress

From month 1 the following changes to the building will affect egress.

Level 1

1. The retail tenancies in the mall outside Farmers become vacant, although access through this area remains, therefore the occupant load in the building reduces.

   The occupant load on the ground floor mall is reduced and all exits from the ground floor are still available at this stage.

Level 2

2. The north stair from the Foodcourt becomes unavailable (marked (1) on plans).

The occupancy of the Foodcourt area is assessed as 426 persons. Available Egress from this space is by the 1.1 metre wide stair to the roof and the 1.0 metre stair to outside on Bunny Street. This provides egress for 90 persons per minute, and therefore yields an egress time of 4.7 minutes.

4.2 Fire Protection

Sprinkler protection remains essentially unchanged although areas under construction will be isolated from the system as required.

5 Month 3

5.1 Means of Egress

From month 3 the following changes to the building will affect egress.

Level 1

1. The gates from the central glazed area to the east become unavailable.

   As the occupant load of the building has been reduced by the elimination of the retail tenancies outside Farmers the occupancy from the building remains compliant.

2. The area to the east of Queensgate Tower is under construction

   The exit from the Tower north stair must always be available (marked (2) on plans).

Level 2

There is no change to the level 2 egress at month 3.

5.2 Fire Protection

Sprinkler protection remains essentially unchanged although areas under construction will be isolated from the system as required.

6 Month 6

6.1 Means of Egress

From month 6 the following changes to the building will affect egress.

Level 1

1. The area outside to the south of Farmers becomes unavailable, therefore the external exits from Farmers are unavailable.

   A new egress from the west of Farmers to outside will be made available (marked (4) on plans). The new doors are to be 1.8 metres clear, open outwards and be clearly signposted.

Egress for the stair from Queensgate Tower must be maintained (marked (6) on plans).

Egress from the western Farmers stair must always be available (marked (3) on plans)

2. The mall section from Farmers to the east is under construction and not occupied. Temporary tenancies in the new carpark to the north of the mall are put into operation.

   The exact arrangements for egress of the mall at this stage will depend on the details of the temporary tenancies although an egress path from the east of the mall will have to be made available (marked (5) on plans).

   At this stage the occupancy of level 1 Farmers and the level 1 mall areas will be 774 persons and 6.4 metres of egress width will be provided, providing an egress time of 2.1 minutes.

Level 2

3. The eastern stair from Farmers is not available.

   Egress from Farmers will be via the Farmers Bunny Street stair or via the mall and to the carpark (marked (8) on plans). The mall must remain open when Farmers is in operation.

4. The stair adjacent to Bunny Street will be removed and replaced by a stair to the carpark to the north.

   The new stair must be in place before the Bunny Street stair is removed and will provide at least the equivalent egress width to the stair removed.

6.2 Fire Protection

The temporary tenancies on both levels will be served by a new sprinkler valveset located near the Queens Drive vehicle entry.

7 Month 12

7.1 Means of Egress

From month 12 the following changes to the building will affect egress.

Level 1

1. Foodtown opens

   Egress from Foodtown is independent of the remainder of the mall and therefore the three proposed final egress points are sufficient for this area.

2. The area in front of Farmers is available.

The main entry to Farmers will be available increasing the available egress from Farmers.

Level 2

3. New stair provided to Farmers

   The upper level of Farmers now has sufficient egress to provide safe egress independent of the mall. Therefore Farmers may open even when the mall is closed.

7.2 Fire Protection

Foodtown is served from the new Knights Road valveset.

8 Month 15

8.1 Means of Egress

From month 15 the following changes to the building will affect egress.

Level 1

1. The central section of mall opens

   The egress corridor to the Foodtown carpark must be available when the central section opens (marked (7) on plans).

2. The Farmers Addition opens

   A new egress door from the addition directly to outside is available. The temporary egress to Bunny Street may be removed once this egress path is available.

Level 2

3. The central mall section opens

   The new central section contains a main entry point to the carpark that serves as the main egress path from this end of the building. To the east of this egress path is a dead end path (marked (10) on plans) of 34 metres, being less than the allowable maximum of 36 metres for a sprinklered building.

   The new mini major requires an egress path back into the Queensgate Tower stairs to be available before opening.

4. The Farmers addition opens

   A new external stair to the east of the tenancy must be available when the extension opens.

8.2 Fire Protection

The new central section of mall will be served by the valveset formally serving the temporary tenancies.

Extract fans located in the new central area are to be operational.

9 Month 16.5

9.1 Means of Egress

From month 16.5 the following changes take place in the building that effect egress.

Level 1

1. The central/eastern section of mall opens

   The egress path from the east of the new section to the carpark must be available when this area opens.

Level 2

2. The central/eastern section of mall opens

   The egress path from the east of the new section to the carpark must be available when this area opens (marked (12) on plans).

3. The upper level Major opens

   As for Foodtown below this major has egress independent of the mall. To provide sufficient width for this area the stair between the mall and level 2 major must be available (marked(11) on plans).

9.2 Fire Protection

The central/eastern section of the mall is served from a new valveset located on Bloomfield Terrace.

Extract fans located within all areas open to the public must be operational.

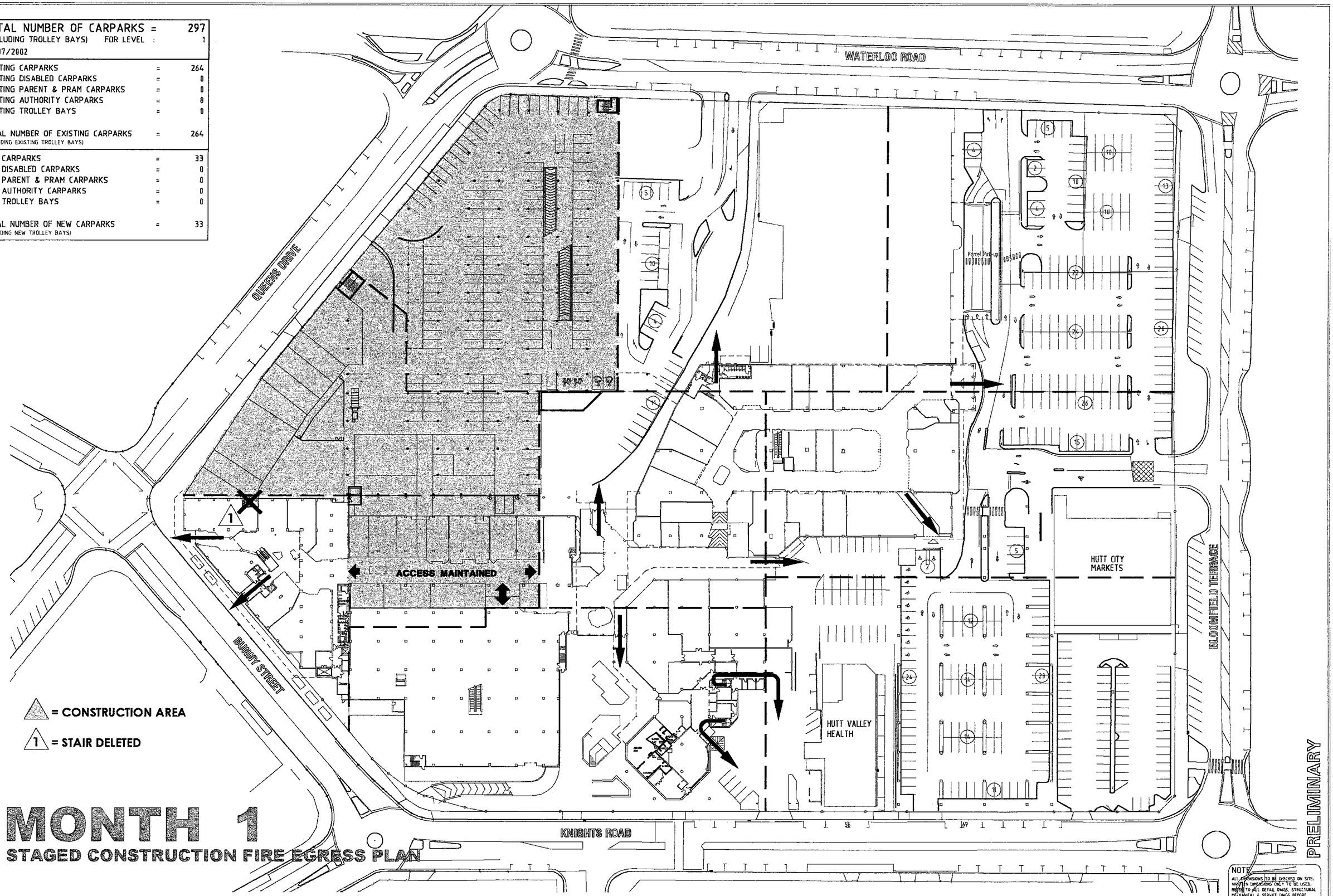
10 Month 18

From month 18 the means of egress and fire protection features for the building are complete. Refer the fire report for egress and fire protection details for the building in this final configuration.

Greg Barnes
Fire Engineer

Direct Dial: +64-4-471 5509
Email: gbarnes@beca.co.nz

TOTAL NUMBER OF CARPARKS =		297
(EXCLUDING TROLLEY BAYS) FOR LEVEL :		1
04/07/2002		
EXISTING CARPARKS	=	264
EXISTING DISABLED CARPARKS	=	0
EXISTING PARENT & PRAM CARPARKS	=	0
EXISTING AUTHORITY CARPARKS	=	0
EXISTING TROLLEY BAYS	=	0
TOTAL NUMBER OF EXISTING CARPARKS (EXCLUDING EXISTING TROLLEY BAYS)	=	264
NEW CARPARKS	=	33
NEW DISABLED CARPARKS	=	0
NEW PARENT & PRAM CARPARKS	=	0
NEW AUTHORITY CARPARKS	=	0
NEW TROLLEY BAYS	=	0
TOTAL NUMBER OF NEW CARPARKS (EXCLUDING NEW TROLLEY BAYS)	=	33



MONTH 1

STAGED CONSTRUCTION FIRE EGRESS PLAN

NOTE
ALL DIMENSIONS TO BE CHECKED ON SITE. WRITTEN DIMENSIONS ONLY TO BE USED. REFER TO ALL DETAIL DWGS, STRUCTURAL MECHANICAL & SERVICE DWGS BEFORE COMMENCING WORK. REFER ANY DISCREPANCIES TO ARCHITECTS.

Rev.	Date	By	Description	Rev.	Date	By	Description	Rev.	Date	By	Description
1	13/12/02	PR	PRELIMINARY ISSUE								

Westfield (New Zealand) Limited
L3 cnr REMUERA RD & NUFFIELD ST, New Market, AUCKLAND, New Zealand
Telephone : (09) 978 5050
Fax num. : (09) 978 5070
Project Architect Mark Oakley

Tebbutt Design Group Limited
Architects and Interior Designers
4 Napier Street, Box 9555, Te Aro, Wellington, New Zealand.
Tel 04-385 9167 Fax 04-385 1836
Checked

Other Consultants
Structural Engineer
Reco Carter Holmes & Ferner Ltd
Tel 04-473 7551 Fax 04-473 7911
Services Engineer
Montgomery Watson NZ Ltd
Tel 04-381 6700 Fax 04-381 6739
Drawn by PR

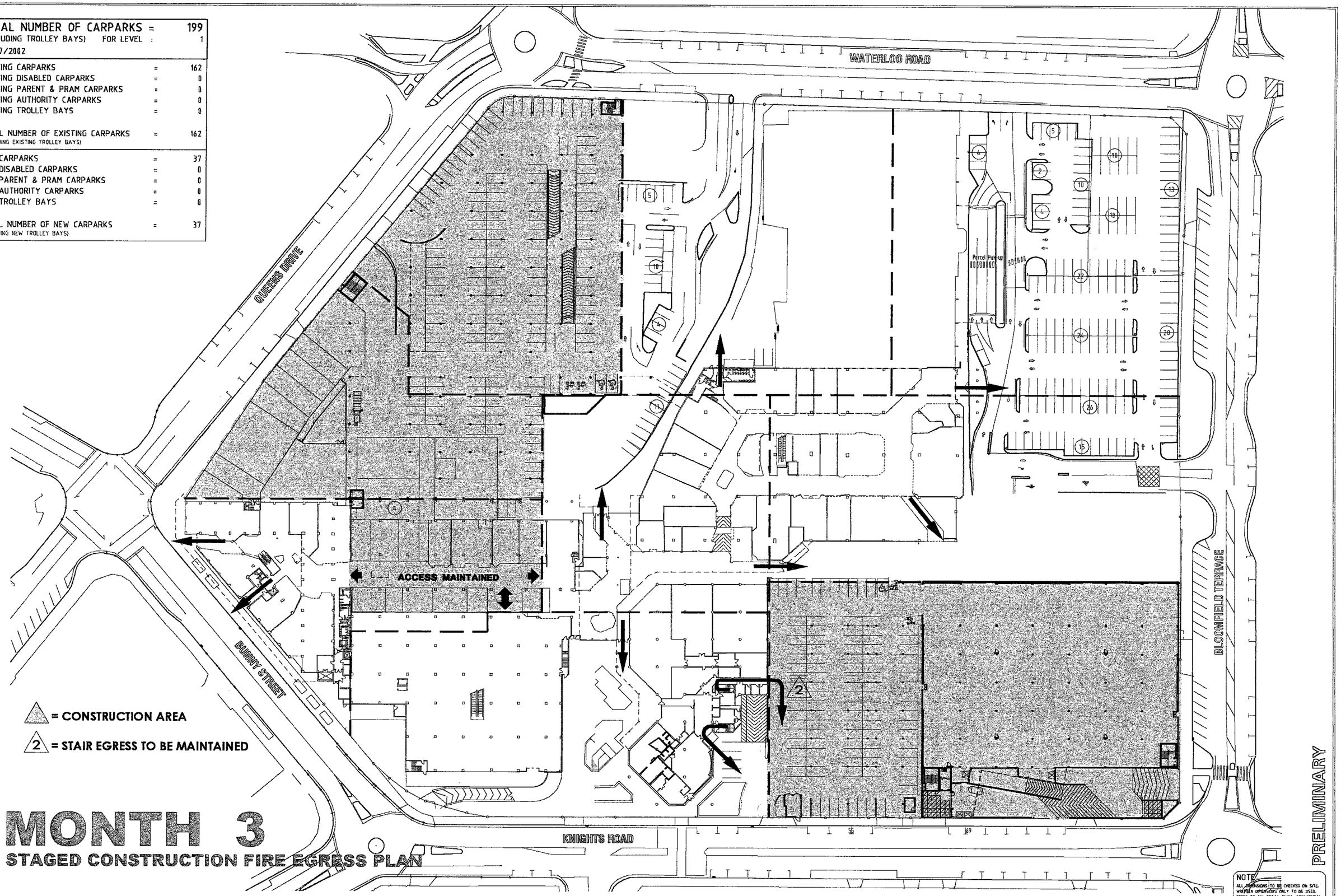
Project QUEENSGATE REDEVELOPMENT

Title **LEVEL 1 - MONTH 1**
STAGED CONSTRUCTION FIRE EGRESS PLAN

Scale	Project/Job Number	Computer Ref.	Drawing Number
1:500 1:1000	02035	L1M1-egress	FEL1-1
Library Ref. J:/QG/	Scheme 35	Date Plotted 13/12/02	Revision 1

CAD FILE No. J:\QG\Construction Staging\Staged Fire Egress Plans\L1M1-egress.dwg - 13/12/02 - 12:04PM

TOTAL NUMBER OF CARPARKS =		199
(EXCLUDING TROLLEY BAYS) FOR LEVEL :		1
04/07/2002		
EXISTING CARPARKS	=	162
EXISTING DISABLED CARPARKS	=	0
EXISTING PARENT & PRAM CARPARKS	=	0
EXISTING AUTHORITY CARPARKS	=	0
EXISTING TROLLEY BAYS	=	0
TOTAL NUMBER OF EXISTING CARPARKS (EXCLUDING EXISTING TROLLEY BAYS)	=	162
NEW CARPARKS	=	37
NEW DISABLED CARPARKS	=	0
NEW PARENT & PRAM CARPARKS	=	0
NEW AUTHORITY CARPARKS	=	0
NEW TROLLEY BAYS	=	0
TOTAL NUMBER OF NEW CARPARKS (EXCLUDING NEW TROLLEY BAYS)	=	37



NOTE
ALL DIMENSIONS TO BE CHECKED ON SITE. WRITTEN DIMENSIONS ONLY TO BE USED. REFER TO ALL DETAIL DWGS, STRUCTURAL MECHANICAL & SERVICE DWGS BEFORE COMMENCING WORK. REFER ANY DISCREPANCIES TO ARCHITECTS.

Rev.	Date	By	Description	Rev.	Date	By	Description	Rev.	Date	By	Description
1	13/12/02	PR	PRELIMINARY ISSUE								

Westfield (New Zealand) Limited
L3 cnr REMUERA RD & NUFFIELD ST, New Market, AUCKLAND, New Zealand
Telephone : (09) 978 5050
Fax Num. : (09) 978 5070
Project Architect Mark Oakley

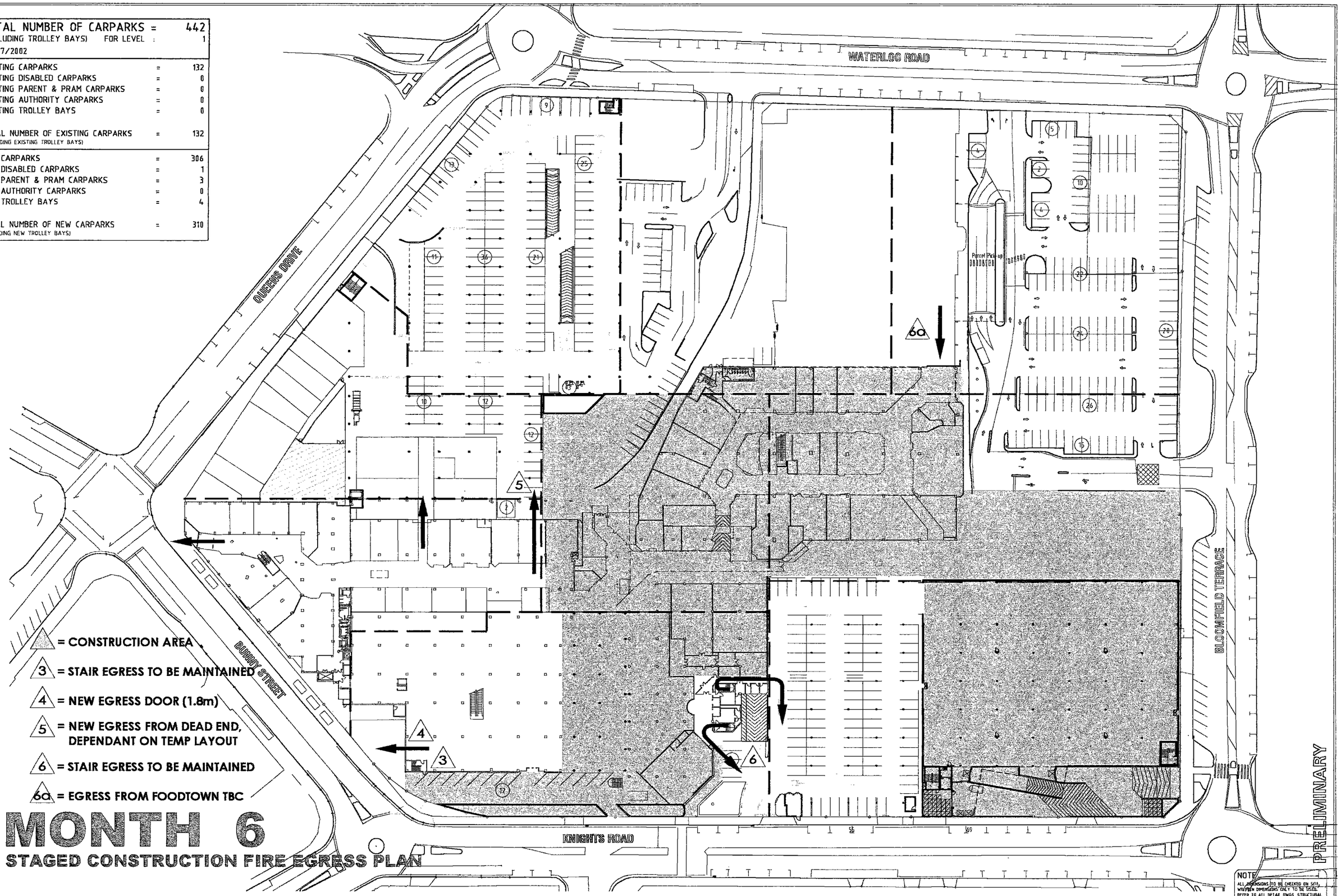
Telnad Design Group Limited
Architects and Interior Designers
4 Nugent Street, Tel 6556, Tel Aux, Nelson, New Zealand.
Tel 04-385 6187 Fax 04-385 9268
Checked

Other Consultants
Structural Engineer
Bacon Cowlin Holdings & Ferner Ltd
Tel 04-473 7551 Fax 04-473 7811
Services Engineer
Montgomery Watson NZ Ltd
Tel 04-381 6700 Fax 04-381 6739
Drawn by PR

Project	QUEENSGATE REDEVELOPMENT			
Title	LEVEL 1 – MONTH 3 STAGED CONSTRUCTION FIRE EGRESS PLAN	Scale 1:500	Project/Job Number 02035	Computer Ref. L1M1–egress	Drawing Number FEL1–3
		Library Ref. J:/QG/	Sheetnum 35	Date Plotted 13/12/02	Revision 1

CAD FILE No J:\QG\Construction Staging\Staged Fire Egress Plans\L1M3-egress.dwg - 13/12/02 - 12:09PM

TOTAL NUMBER OF CARPARKS =		442
(EXCLUDING TROLLEY BAYS) FOR LEVEL :		1
04/07/2002		
EXISTING CARPARKS	=	132
EXISTING DISABLED CARPARKS	=	0
EXISTING PARENT & PRAM CARPARKS	=	0
EXISTING AUTHORITY CARPARKS	=	0
EXISTING TROLLEY BAYS	=	0
TOTAL NUMBER OF EXISTING CARPARKS (EXCLUDING EXISTING TROLLEY BAYS)	=	132
NEW CARPARKS	=	306
NEW DISABLED CARPARKS	=	1
NEW PARENT & PRAM CARPARKS	=	3
NEW AUTHORITY CARPARKS	=	0
NEW TROLLEY BAYS	=	4
TOTAL NUMBER OF NEW CARPARKS (EXCLUDING NEW TROLLEY BAYS)	=	310



= CONSTRUCTION AREA

3 = STAIR EGRESS TO BE MAINTAINED

4 = NEW EGRESS DOOR (1.8m)

5 = NEW EGRESS FROM DEAD END, DEPENDANT ON TEMP LAYOUT

6 = STAIR EGRESS TO BE MAINTAINED

6a = EGRESS FROM FOODTOWN TBC

MONTH 6

STAGED CONSTRUCTION FIRE EGRESS PLAN

NOTE:
ALL DIMENSIONS TO BE CHECKED ON SITE, WRITTEN DIMENSIONS ONLY TO BE USED. REFER TO ALL DETAIL DWGS, STRUCTURAL, MECHANICAL & SERVICE DWGS BEFORE COMMENCING WORK. REFER ANY DISCREPANCIES TO ARCHITECTS.

CAD FILE No. J:/QG/Construction Staging\Staged Fire Egress Plans\L1M6-egress.dwg - 13/12/02 - 12:17PM

Rev.	Date	By	Description	Rev.	Date	By	Description	Rev.	Date	By	Description
1	13/12/02	PM	PRELIMINARY ISSUE								

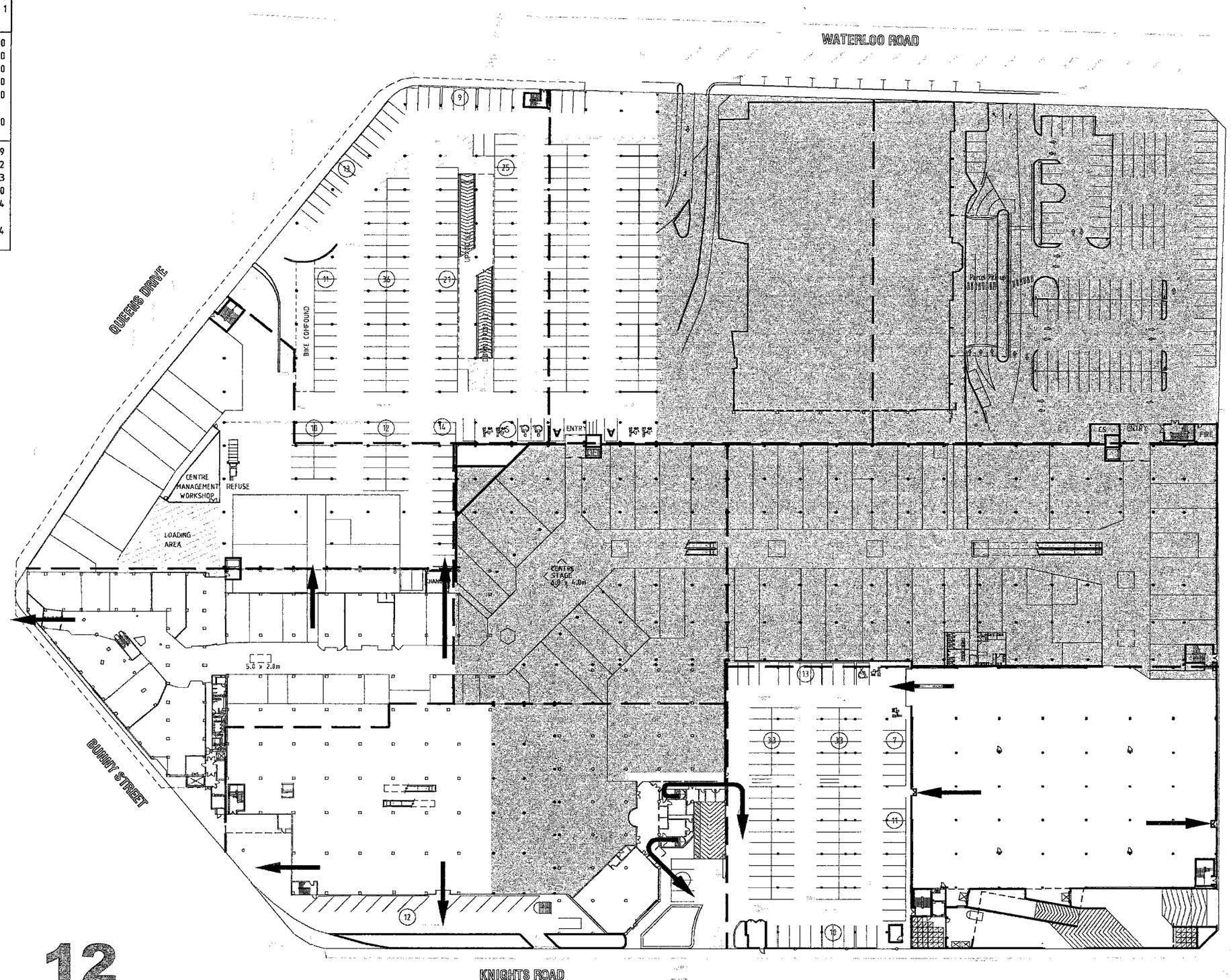
Westfield (New Zealand) Limited
L3 cnr REMUERA RD & NUFFIELD ST, New Market, AUCKLAND, New Zealand
Telephone : (09) 978 5050
Fax Num. : (09) 978 5070
Project Architect Mark Oakley

Tabod Design Group Limited
architects and interior designers
4 Nugent Street, Box 8555, Te Aro, Wellington, New Zealand.
Tel 04- 385 9987
Fax 04- 385 9928
Checked

Other Consultants
Structural Engineer
Rasco Barker Holdings & Farmer Ltd
Tel 04-473 7291 Fax 04-473 7911
Services Engineer
Montgomery Watson NZ Ltd
Tel 04-381 6700 Fax 04-381 6739
Drawn by PM

Project	QUEENSGATE REDEVELOPMENT			
Title	LEVEL 1 – MONTH 6 STAGED CONSTRUCTION FIRE EGRESS PLAN	Scale 1:500	Project/Job Number 02035	Computer Ref. L1M6–egress	Drawing Number FEL1–6
		Library Ref. J:/QG/CD	Submrw 35	Date Plotted 13/12/02	Revision 3

TOTAL NUMBER OF CARPARKS =		284
(EXCLUDING TROLLEY BAYS) FOR LEVEL		1
04/07/2002		
EXISTING CARPARKS	=	0
EXISTING DISABLED CARPARKS	=	0
EXISTING PARENT & PRAM CARPARKS	=	0
EXISTING AUTHORITY CARPARKS	=	0
EXISTING TROLLEY BAYS	=	0
TOTAL NUMBER OF EXISTING CARPARKS (EXCLUDING EXISTING TROLLEY BAYS)	=	0
NEW CARPARKS	=	279
NEW DISABLED CARPARKS	=	2
NEW PARENT & PRAM CARPARKS	=	3
NEW AUTHORITY CARPARKS	=	0
NEW TROLLEY BAYS	=	4
TOTAL NUMBER OF NEW CARPARKS (EXCLUDING NEW TROLLEY BAYS)	=	284



= CONSTRUCTION AREA

MONTH 12

STAGED CONSTRUCTION FIRE EGRESS PLAN

PRELIMINARY

NOTE
ALL DIMENSIONS TO BE CHECKED ON SITE.
WRITTEN DIMENSIONS ONLY TO BE USED.
REFER TO ALL DETAIL DWGS, STRUCTURAL, MECHANICAL & SERVICE DWGS BEFORE COMMENCING WORK.
REFER ANY DISCREPANCIES TO ARCHITECTS.

Rev.	Date	By	Description	Rev.	Date	By	Description	Rev.	Date	By	Description
1	13/12/02	PR	PRELIMINARY ISSUE								

Westfield (New Zealand) Limited
L3 cnr REMUERA RD & NUFFIELD ST.
New Market, AUCKLAND, New Zealand
Telephone : (09) 978 5050
Fax Num. : (09) 978 5070
Project Architect Mark OakleyChecked

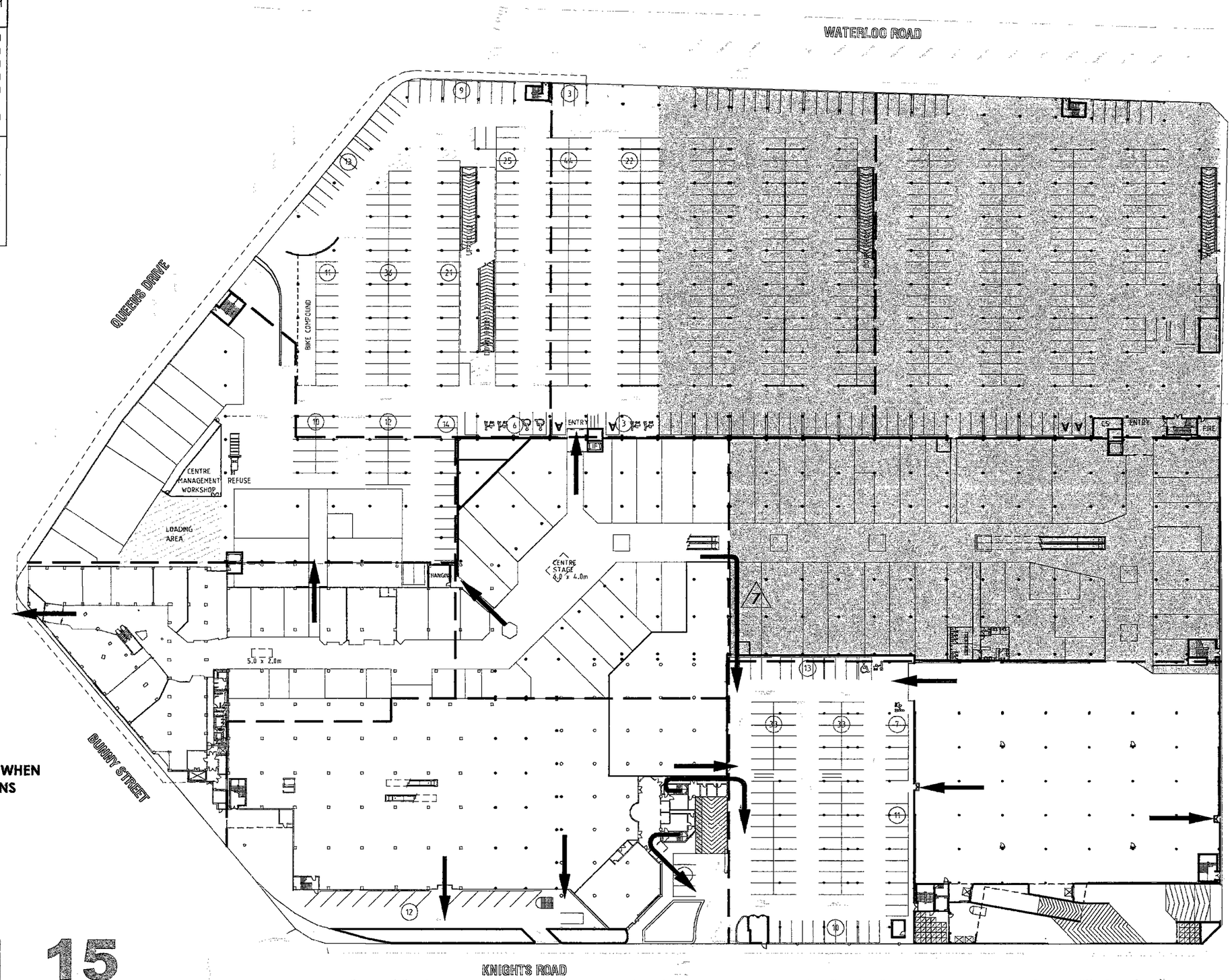
Tatrod Design Group Limited
Architects and Interior Designers
4 Napier Street, PO Box 6355, Te Aro, Wellington.
Tel 04-385 9999
Fax 04-385 9998
Drawn by PR

Other Consultants
Structural Engineer
Beca Carter Hollings & Ferner Ltd
Tel 04-473 7551 Fax 04-473 7911
Services Engineer
Montgomery Watson NZ Ltd
Tel 04-381 6700 Fax 04-381 6739

Project	QUEENSGATE REDEVELOPMENT	Scale	Project/Job Number	Computer Ref.	Drawing Number
Title	LEVEL 1 - MONTH 12 STAGED CONSTRUCTION FIRE EGRESS PLAN	1:500	02035	L1M12-egress	FEL1-12
		Library Ref. J:/QG/	Scheme 35	Date Plotted 13/12/02	Revision 1

DAD FILE NO J:\QG\Construction Staging\Staged Fire Egress Plans\L1M12-egress.dwg - 13/12/02 - 12:18PM

TOTAL NUMBER OF CARPARKS =		352
(EXCLUDING TROLLEY BAYS) FOR LEVEL :		1
04/07/2002		
EXISTING CARPARKS	=	0
EXISTING DISABLED CARPARKS	=	0
EXISTING PARENT & PRAM CARPARKS	=	0
EXISTING AUTHORITY CARPARKS	=	0
EXISTING TROLLEY BAYS	=	0
TOTAL NUMBER OF EXISTING CARPARKS (EXCLUDING EXISTING TROLLEY BAYS)	=	0
NEW CARPARKS	=	342
NEW DISABLED CARPARKS	=	3
NEW PARENT & PRAM CARPARKS	=	5
NEW AUTHORITY CARPARKS	=	2
NEW TROLLEY BAYS	=	5
TOTAL NUMBER OF NEW CARPARKS (EXCLUDING NEW TROLLEY BAYS)	=	352



= CONSTRUCTION AREA

7 = CORRIDOR AVAILABLE WHEN CENTRAL SECTION OPENS

MONTH 15

STAGED CONSTRUCTION FIRE EGRESS PLAN

PRELIMINARY

NOTE
ALL DIMENSIONS TO BE CHECKED ON SITE. WRITTEN DIMENSIONS ONLY TO BE USED. REFER TO ALL DETAIL DWGS, STRUCTURAL MECHANICAL & SERVICE DWGS BEFORE COMMENCING WORK. REFER ANY DISCREPANCIES TO ARCHITECTS.

CAD FILE NO. J:/QG/Construction Staging/Staged Fire Egress Plans/L1M15-egress.dwg - 13/12/02 - 12:18PM

Rev.	Date	By	Description	Rev.	Date	By	Description	Rev.	Date	By	Description
1	13/12/02	PR	PRELIMINARY ISSUE								

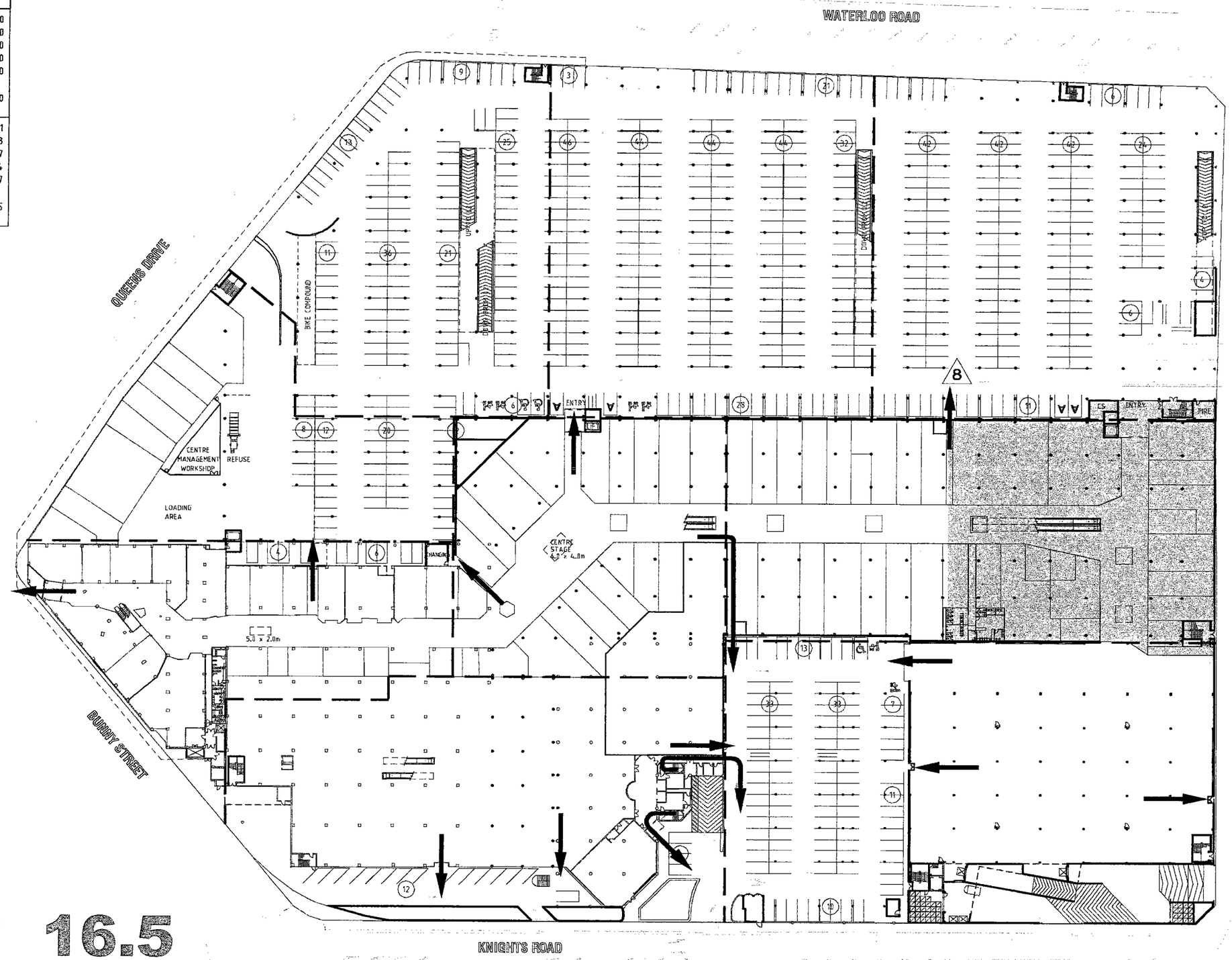
Westfield (New Zealand) Limited
13 cnr REMUERA RD & NUFFIELD ST, New Market, AUCKLAND, New Zealand
Telephone : (09) 978 5050
Fax Num. : (09) 978 5070
Project Architect Mark OakleyChecked

Tatford Design Group Limited
Architects and Interior Designers
4 Hopper Street, Box 5358, Te Aro, Wellington.
Tel 04-473 7251 Fax 04-473 7911
Drawn by PR

Other Consultants
Structural Engineer
Beca Carter Hollings & Ferner Ltd
Tel 04-473 7551 Fax 04-473 7911
Services Engineer
Montgomery Watson NZ Ltd
Tel 04-381 6700 Fax 04-381 6739

Project	QUEENSGATE REDEVELOPMENT			
Title	LEVEL 1 - MONTH 15 STAGED CONSTRUCTION FIRE EGRESS PLAN	Scale 1:500	Project/Job Number 02035	Computer Ref L1M15-egress	Drawing Number FEL1-15
		Library Ref. J:/QG/	Scheme 35	Date Plotted 13/12/02	Revision 1

TOTAL NUMBER OF CARPARKS = (EXCLUDING TROLLEY BAYS) FOR LEVEL : 19/06/2002		745 1
EXISTING CARPARKS	=	0
EXISTING DISABLED CARPARKS	=	0
EXISTING PARENT & PRAM CARPARKS	=	0
EXISTING AUTHORITY CARPARKS	=	0
EXISTING TROLLEY BAYS	=	0
TOTAL NUMBER OF EXISTING CARPARKS (EXCLUDING EXISTING TROLLEY BAYS)	=	0
NEW CARPARKS	=	731
NEW DISABLED CARPARKS	=	3
NEW PARENT & PRAM CARPARKS	=	7
NEW AUTHORITY CARPARKS	=	4
NEW TROLLEY BAYS	=	7
TOTAL NUMBER OF NEW CARPARKS (EXCLUDING NEW TROLLEY BAYS)	=	745



△ = CONSTRUCTION AREA

8 = EGRESS TO CARPARK

MONTH 16.5

STAGED CONSTRUCTION FIRE EGRESS PLAN

PRELIMINARY

NOTE
ALL DIMENSIONS TO BE CHECKED ON SITE.
WRITTEN DIMENSIONS ONLY TO BE USED.
REFER TO ALL DETAIL DWGS, STRUCTURAL MECHANICAL & SERVICE DWGS BEFORE COMMENCING WORK.
REFER ANY DISCREPANCIES TO ARCHITECTS.

Rev.	Date	By	Description	Rev.	Date	By	Description	Rev.	Date	By	Description
1	13/12/02	PR	PRELIMINARY ISSUE								

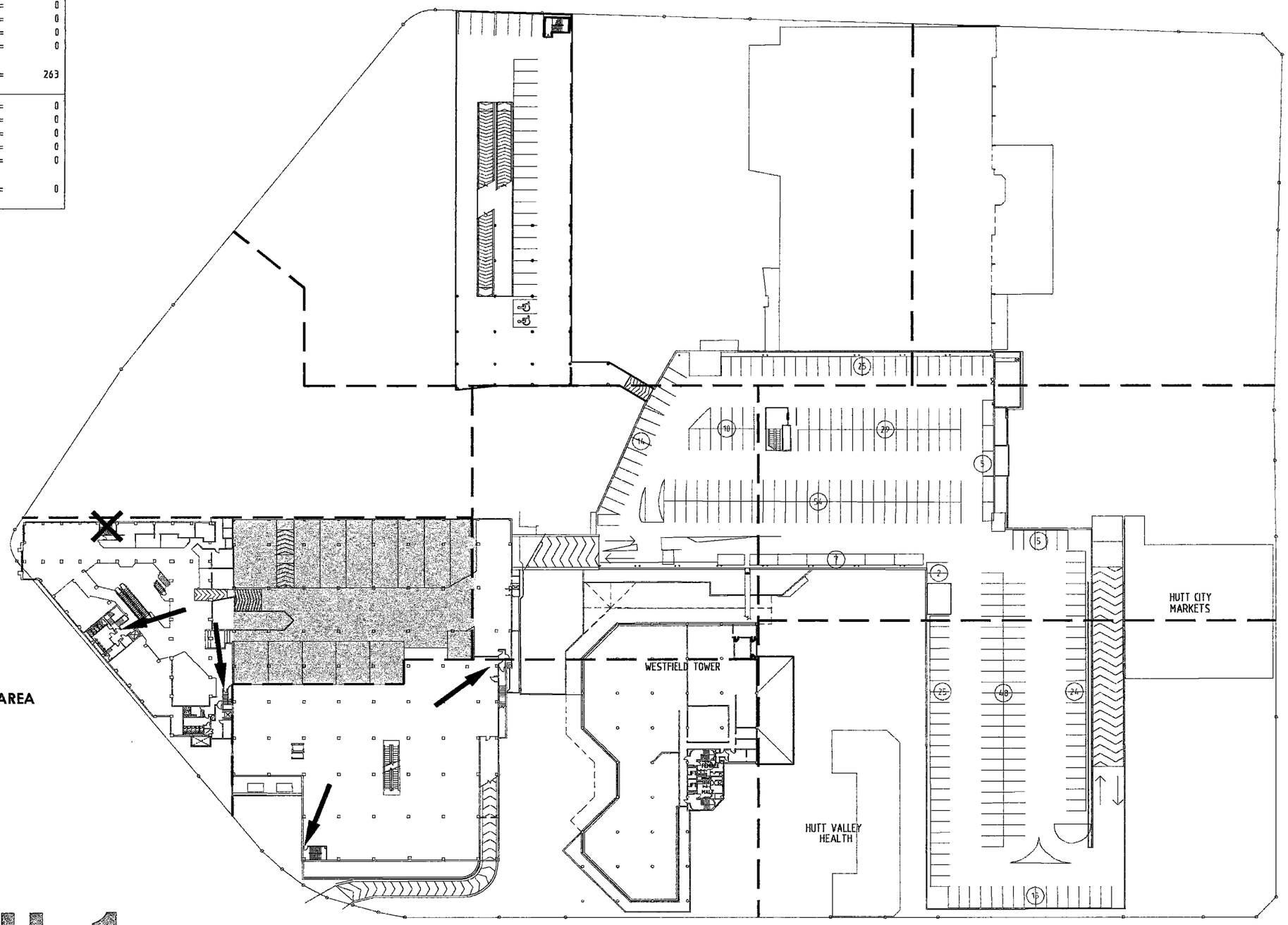
Westfield (New Zealand) Limited
L3 cnr REMUERA RD & NUFFIELD ST, New Market, AUCKLAND, New Zealand
Telephone : (09) 978 5050
Fax Num. : (09) 978 5070
Project Architect Mark OakleyChecked
Drawn by PR

Other Consultants
Structural Engineer
Bacon Donald Holloway & Farmer Ltd
Tel 04-473 7551 Fax 04-473 7911
Services Engineer
Montgomery Watson NZ Ltd
Tel 04-381 6700 Fax 04-381 6738

Project: QUEENSGATE REDEVELOPMENT	Scale: 1:500	Project/Job Number: 02035	Computer Ref.: L1M18-egress	Drawing Number: FEL1-16.5
Title: LEVEL 1 - MONTH 16.5 STAGED CONSTRUCTION FIRE EGRESS PLAN	Library Ref.: J:/QG/	Scheme: 35	Date Plotted: 13/12/02	Revision: 1

CAD FILE NO J:\QG\Construction Staging\Staged Fire Egress Plans\L1M16.5-egress.dwg - 13/12/02 - 12:19PM

TOTAL NUMBER OF CARPARKS =		263
(EXCLUDING TROLLEY BAYS) FOR LEVEL :		2
04/07/2002		
EXISTING CARPARKS	=	263
EXISTING DISABLED CARPARKS	=	0
EXISTING PARENT & PRAM CARPARKS	=	0
EXISTING AUTHORITY CARPARKS	=	0
EXISTING TROLLEY BAYS	=	0
TOTAL NUMBER OF EXISTING CARPARKS (EXCLUDING EXISTING TROLLEY BAYS)	=	263
NEW CARPARKS	=	0
NEW DISABLED CARPARKS	=	0
NEW PARENT & PRAM CARPARKS	=	0
NEW AUTHORITY CARPARKS	=	0
NEW TROLLEY BAYS	=	0
TOTAL NUMBER OF NEW CARPARKS (EXCLUDING NEW TROLLEY BAYS)	=	0



MONTH 1

STAGED CONSTRUCTION FIRE EGRESS PLAN

PRELIMINARY

NOTE
ALL DIMENSIONS TO BE CHECKED ON SITE. WRITTEN DIMENSIONS ONLY TO BE USED. REFER TO ALL DETAIL DWGS, STRUCTURAL MECHANICAL & SERVICE DWGS BEFORE COMMENCING WORK. REFER ANY DISCREPANCIES TO ARCHITECTS.

CAD FILE NO. J:\QG\Construction Staging\Staged Fire Egress Plans\L2M1-egress.dwg - 13/12/02 - 12:23PM

Rev.	Date	By	Description	Rev.	Date	By	Description	Rev.	Date	By	Description
1	13/12/02	PR	PRELIMINARY ISSUE								

Westfield (New Zealand) Limited
L3 cnr REMUERA RD & NUFFIELD ST.
New Market, AUCKLAND, New Zealand
Telephone : (09) 978 5050
Fax Num. : (09) 978 5070
Project Architect Mark Oakley

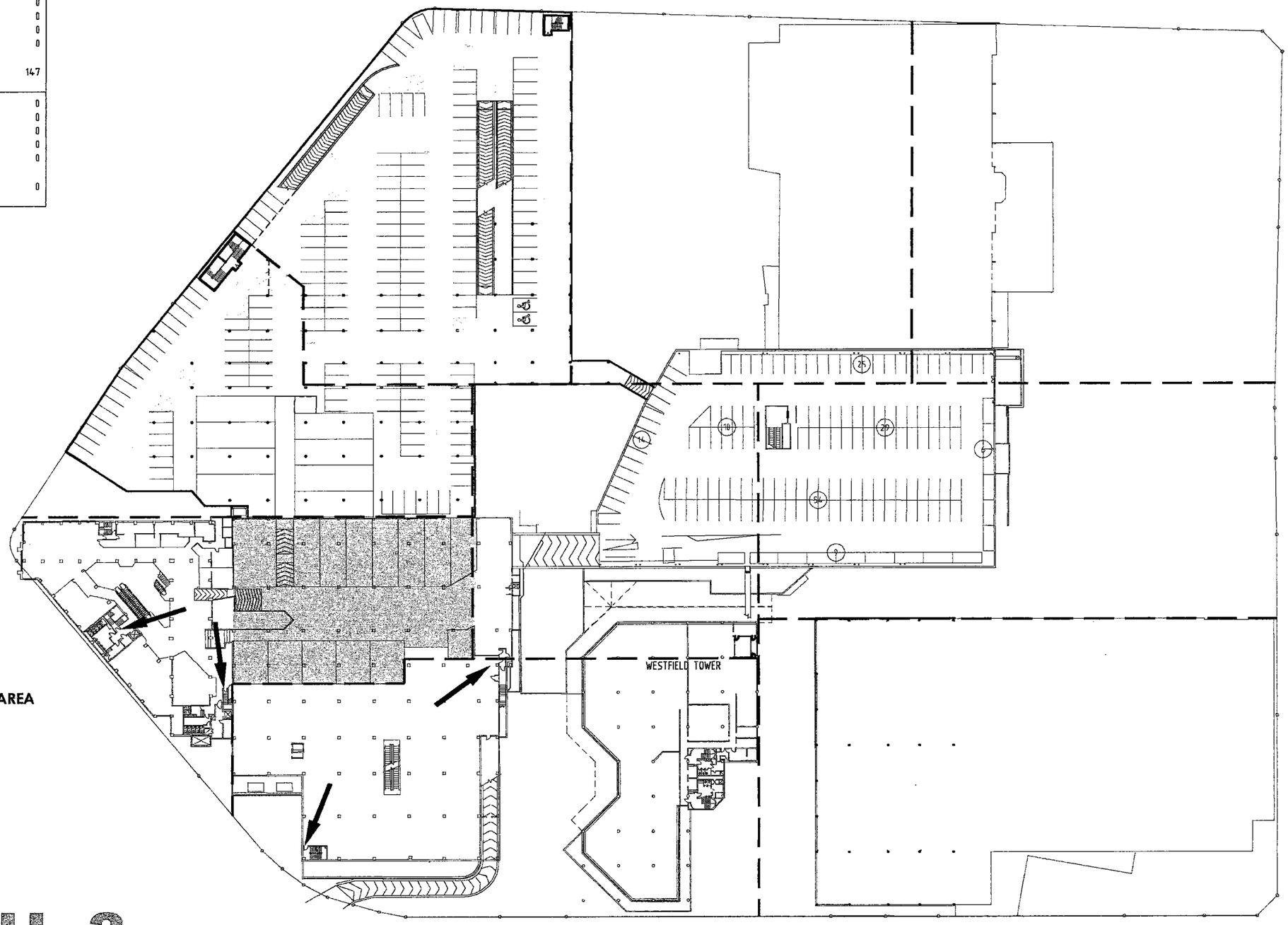
Checked

Other Consultants
Structural Engineer
Bone Carter Hastings & Farmer Ltd
Tel 04-473 7551 Fax 04-473 7911
Services Engineer
Montgomery Watson NZ Ltd
Tel 04-381 6700 Fax 04-381 6730

Drawn by PR

Project	Scale	Project/Job Number	Computer Ref.	Drawing Number
QUEENSGATE REDEVELOPMENT	1:500	02035	L2M1-egress	FEL2-1
Title: LEVEL 2 – MONTH 1 STAGED CONSTRUCTION FIRE EGRESS PLAN	Library Ref. J:/QG/	Scheme 35	Date Plotted 13/12/02	Revision 1

TOTAL NUMBER OF CARPARKS =		147
(EXCLUDING TROLLEY BAYS) FOR LEVEL :		2
04/07/2002		
EXISTING CARPARKS	=	147
EXISTING DISABLED CARPARKS	=	0
EXISTING PARENT & PRAM CARPARKS	=	0
EXISTING AUTHORITY CARPARKS	=	0
EXISTING TROLLEY BAYS	=	0
TOTAL NUMBER OF EXISTING CARPARKS (EXCLUDING EXISTING TROLLEY BAYS)	=	147
NEW CARPARKS	=	0
NEW DISABLED CARPARKS	=	0
NEW PARENT & PRAM CARPARKS	=	0
NEW AUTHORITY CARPARKS	=	0
NEW TROLLEY BAYS	=	0
TOTAL NUMBER OF NEW CARPARKS (EXCLUDING NEW TROLLEY BAYS)	=	0



= CONSTRUCTION AREA

MONTH 3

STAGED CONSTRUCTION FIRE EGRESS PLAN

PRELIMINARY

NOTE
ALL DIMENSIONS TO BE CHECKED ON SITE. WRITTEN DIMENSIONS ONLY TO BE USED. REFER TO ALL DETAIL DWGS, STRUCTURAL MECHANICAL & SERVICE DWGS BEFORE COMMENCING WORK. REFER ANY DISCREPANCIES TO ARCHITECTS.

CAD FILE NO J:/QG\Construction Staging\Staged Fire Egress Plans\L2M3-egress.dwg - 13/12/02 - 12:23PM

Rev.	Date	By	Description	Rev.	Date	By	Description	Rev.	Date	By	Description
1	13/12/02	PR	PRELIMINARY ISSUE								

Westfield (New Zealand) Limited
L3 cnr REMUERA RD & NUFFIELD ST.
New Market, AUCKLAND, New Zealand
Telephone : (09) 978 5050
Fax num. : (09) 978 5070
Project Architect Mark Oakley

Tetrad Design Group Limited
Architects and Interior Designers
4 Hunter Street, Box 6555, Te Aro, Wellington, New Zealand
Tel 04-385 9987 Fax 04-385 9986

Checked

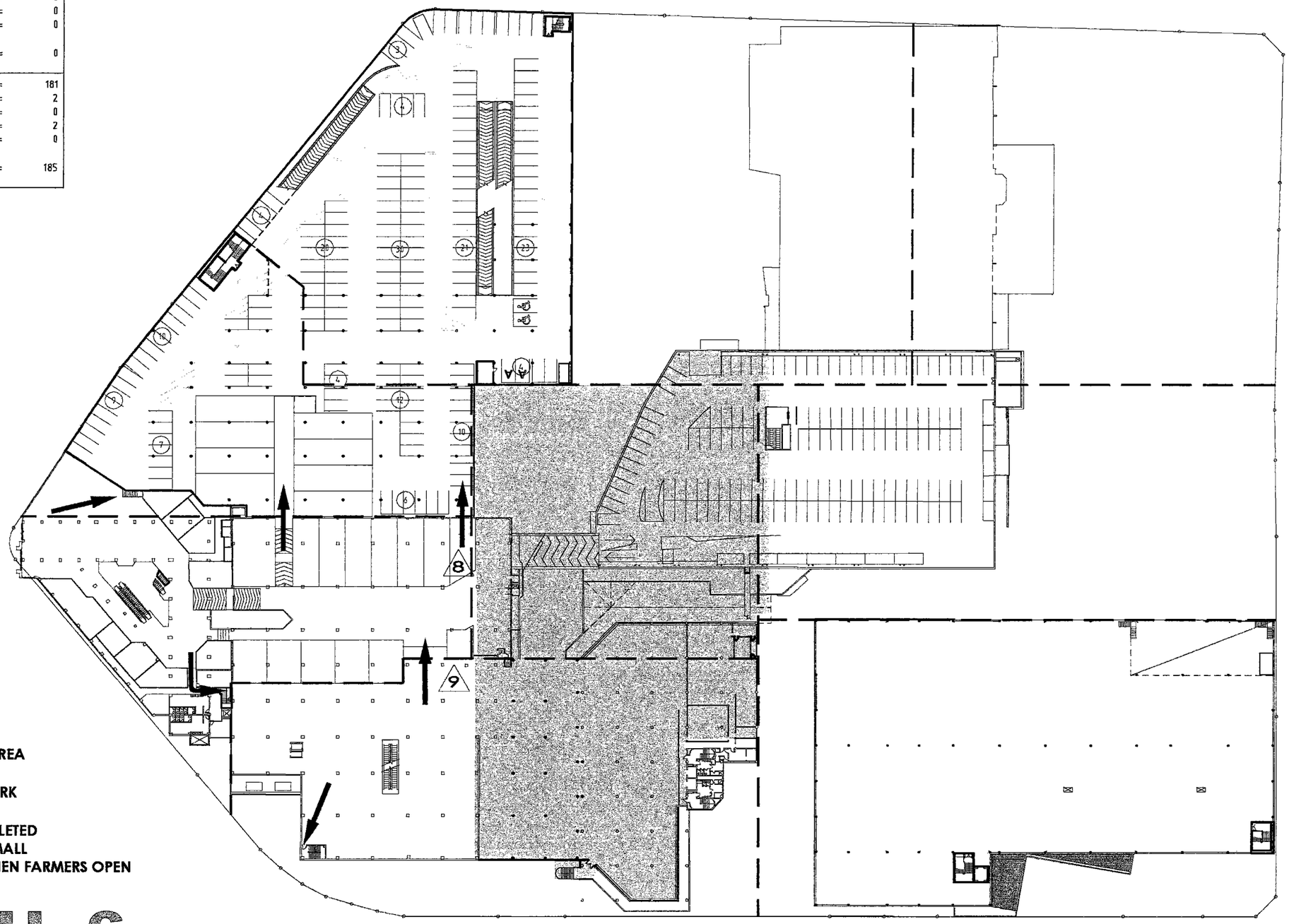
Other Consultants
Structural Engineer
Beca Carter Hollings & Ferner Ltd
Tel 04-473 7951 Fax 04-473 7911
Services Engineer
Montgomery Watson NZ Ltd
Tel 04-381 6700 Fax 04-381 6730

Drawn by PR

Project	QUEENSGATE REDEVELOPMENT	Scale	Project/Job Number	Computer Ref.	Drawing Number
Title	LEVEL 2 – MONTH 3 STAGED CONSTRUCTION FIRE EGRESS PLAN	1:500	02035	L2M3-egress	FEL2-3
		Library Ref. J:/QG/	Scheme 35	Date Plotted 13/12/02	Revision 1

TOTAL NUMBER OF CARPARKS =	185
(EXCLUDING TROLLEY BAYS) FOR LEVEL :	2
04/07/2002	

EXISTING CARPARKS	=	0
EXISTING DISABLED CARPARKS	=	0
EXISTING PARENT & PRAM CARPARKS	=	0
EXISTING AUTHORITY CARPARKS	=	0
EXISTING TROLLEY BAYS	=	0
TOTAL NUMBER OF EXISTING CARPARKS (EXCLUDING EXISTING TROLLEY BAYS)	=	0
NEW CARPARKS	=	181
NEW DISABLED CARPARKS	=	2
NEW PARENT & PRAM CARPARKS	=	0
NEW AUTHORITY CARPARKS	=	2
NEW TROLLEY BAYS	=	0
TOTAL NUMBER OF NEW CARPARKS (EXCLUDING NEW TROLLEY BAYS)	=	185



= CONSTRUCTION AREA

8 = EGRESS TO CARPARK

9 = FARMERS STAIR DELETED
EGRESS NOW TO MALL
MUST BE OPEN WHEN FARMERS OPEN

MONTH 6

STAGED CONSTRUCTION FIRE EGRESS PLAN

PRELIMINARY

NOTE
ALL DIMENSIONS TO BE CHECKED ON SITE.
WRITTEN DIMENSIONS ONLY TO BE USED.
REFER TO ALL DETAIL DWGS, STRUCTURAL MECHANICAL & SERVICE DWGS BEFORE COMMENCING WORK.
REFER ANY DISCREPANCIES TO ARCHITECTS.

Rev.	Date	By	Description	Rev.	Date	By	Description	Rev.	Date	By	Description
1	13/12/02	PR	PRELIMINARY ISSUE								

Westfield (New Zealand) Limited
L3 cnr REMUERA RD & NUFFIELD ST,
New Market, AUCKLAND, New Zealand
Telephone : (09) 978 5050
Fax Num. : (09) 978 5070
Project Architect Mark Oakley

Tabrad Design Group Limited
Architects and Interior Designers
4 Hooper Street,
Tel 0355, Tel 04-
Wellington,
New Zealand.
Tel 04-385 9187
Fax 04-385 1898

Other Consultants
Structural Engineer
Bace Carter Hollings & Ferner Ltd
Tel 04-473 7551 Fax 04-473 7911
Services Engineer
Montgomery Watson NZ Ltd
Tel 04-381 6700 Fax 04-381 6739

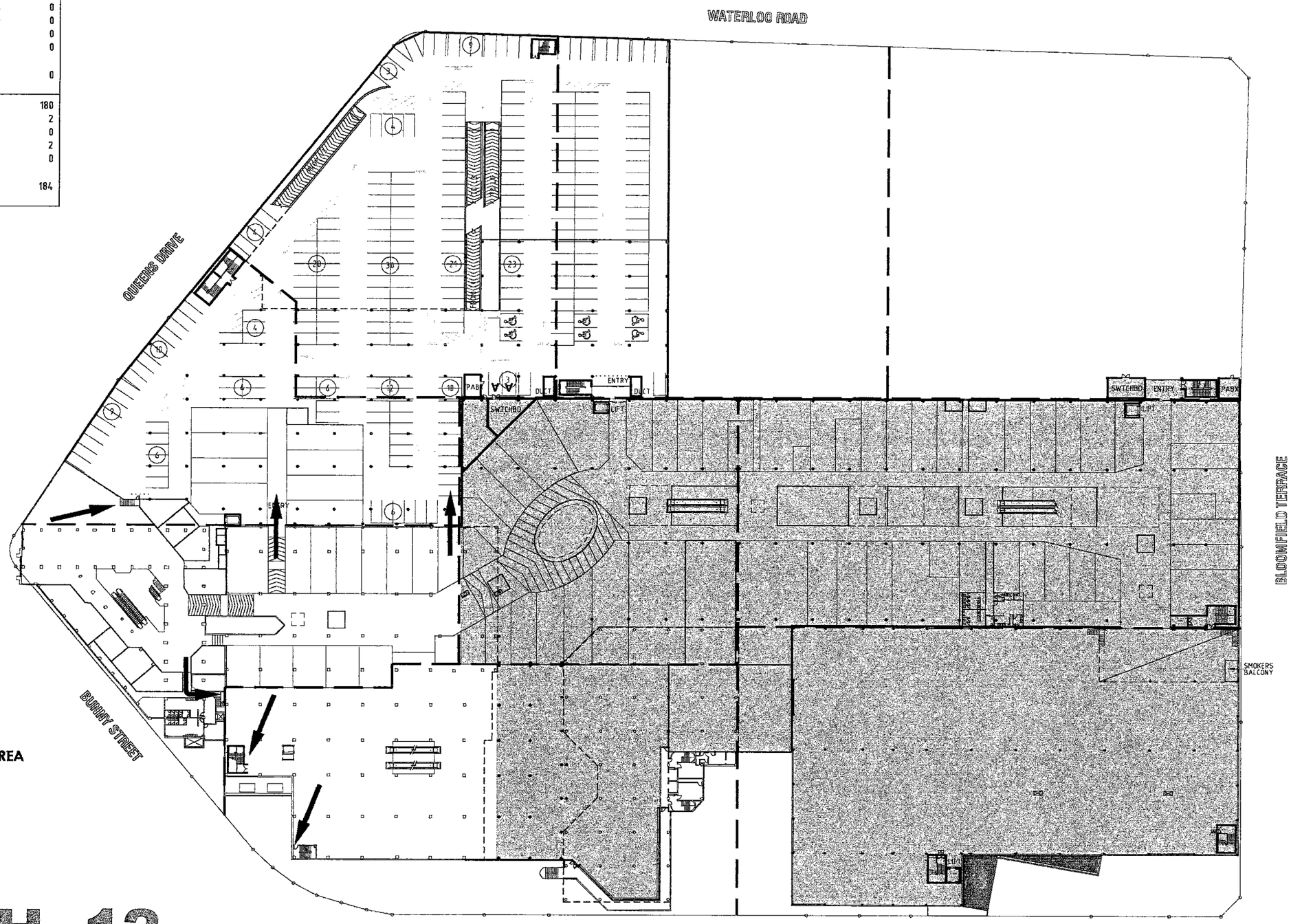
Checked

Drawn by PR

Project	QUEENSGATE REDEVELOPMENT	Scale	Project/Job Number	Computer Ref.	Drawing Number
Title	LEVEL 2 – MONTH 6 STAGED CONSTRUCTION FIRE EGRESS PLAN		02035	L2M6-egress	FEL2-6
		Library Ref. J:/OG/	Scheme 35	Date Plotted 13/12/02	Revision 1

CAD FILE J:\OG\35\Staged Fire Egress Plans\L2M6-egress.dwg - 13/12/02 - 12:22PM

TOTAL NUMBER OF CARPARKS =		184
(EXCLUDING TROLLEY BAYS) FOR LEVEL :		2
04/07/2002		
EXISTING CARPARKS	=	0
EXISTING DISABLED CARPARKS	=	0
EXISTING PARENT & PRAM CARPARKS	=	0
EXISTING AUTHORITY CARPARKS	=	0
EXISTING TROLLEY BAYS	=	0
TOTAL NUMBER OF EXISTING CARPARKS (EXCLUDING EXISTING TROLLEY BAYS)	=	0
NEW CARPARKS	=	180
NEW DISABLED CARPARKS	=	2
NEW PARENT & PRAM CARPARKS	=	0
NEW AUTHORITY CARPARKS	=	2
NEW TROLLEY BAYS	=	0
TOTAL NUMBER OF NEW CARPARKS (EXCLUDING NEW TROLLEY BAYS)	=	184



= CONSTRUCTION AREA

MONTH 12

STAGED CONSTRUCTION FIRE EGRESS PLAN

PRELIMINARY

NOTE
ALL DIMENSIONS TO BE CHECKED ON SITE.
WRITTEN DIMENSIONS ONLY TO BE USED.
REFER TO ALL DETAIL DWGS, STRUCTURAL MECHANICAL & SERVICE DWGS BEFORE COMMENCING WORK.
REPORT ANY DISCREPANCIES TO ARCHITECTS.

Rev.	Date	By	Description	Rev.	Date	By	Description	Rev.	Date	By	Description
1	13/12/02	PR	PRELIMINARY ISSUE								

Westfield (New Zealand) Limited
L3 cnr REMUERA RD & NUFFIELD ST,
New Market, AUCKLAND, New Zealand
Telephone : (09) 978 5050
Fax Num. : (09) 978 5070
Project Architect Mark OakleyChecked

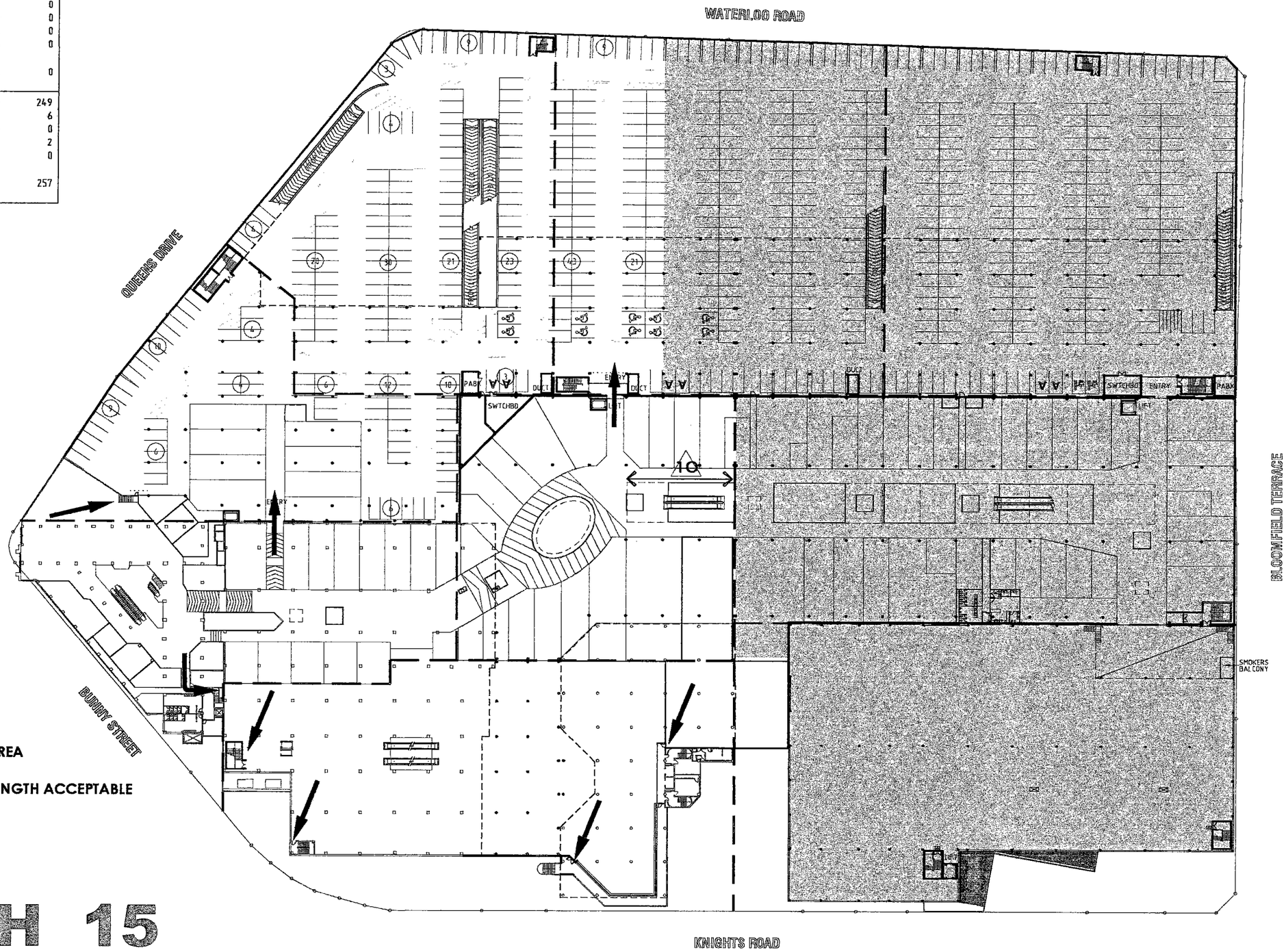
Tatrod Design Group Limited
Architects and Interior Designers
4 Hoggs Road,
Box 25081 Te Aro,
Wellington,
New Zealand.
Tel 04-385 8484
Fax 04-385 9236
Drawn by PR

Other Consultants
Structural Engineer
Beca Carter Hollings & Ferner Ltd
Tel 04-473 7591 Fax 04-473 7911
Services Engineer
Montgomery Watson NZ Ltd
Tel 04-381 6780 Fax 04-381 6759

Project QUEENSGATE REDEVELOPMENT	Scale 1:500	Project/Job Number 02035	Computer Ref. L2M12-egress	Drawing Number FEL2-12
Title **LEVEL 2 - MONTH 12** STAGED CONSTRUCTION FIRE EGRESS PLAN	Library Ref. J:/QG/	Scheme 35	Date Plotted 13/12/02	Revision 1

CAD FILE No. J:\QG\Construction Staging\Staged Fire Egress Plans\L2M12-egrs.dwg - 13/12/02 - 12:26PM

TOTAL NUMBER OF CARPARKS =		257
(EXCLUDING TROLLEY BAYS) FOR LEVEL :		2
04/07/2002		
EXISTING CARPARKS	=	0
EXISTING DISABLED CARPARKS	=	0
EXISTING PARENT & PRAM CARPARKS	=	0
EXISTING AUTHORITY CARPARKS	=	0
EXISTING TROLLEY BAYS	=	0
TOTAL NUMBER OF EXISTING CARPARKS (EXCLUDING EXISTING TROLLEY BAYS)	=	0
NEW CARPARKS	=	249
NEW DISABLED CARPARKS	=	6
NEW PARENT & PRAM CARPARKS	=	0
NEW AUTHORITY CARPARKS	=	2
NEW TROLLEY BAYS	=	0
TOTAL NUMBER OF NEW CARPARKS (EXCLUDING NEW TROLLEY BAYS)	=	257



= CONSTRUCTION AREA

10 = DEAD END PATH LENGTH ACCEPTABLE

MONTH 15

STAGED CONSTRUCTION FIRE EGRESS PLAN

PRELIMINARY

NOTE
ALL DIMENSIONS TO BE CHECKED ON SITE. WRITTEN DIMENSIONS ONLY TO BE USED. REFER TO ALL DETAIL DWGS, STRUCTURAL MECHANICAL & SERVICE DWGS BEFORE COMMENCING WORK. REFER ANY DISCREPANCIES TO ARCHITECTS.

Rev.	Date	By	Description	Rev.	Date	By	Description	Rev.	Date	By	Description
1	13/12/02	PR	PRELIMINARY ISSUE								

Westfield (New Zealand) Limited
L3 cnr REMUERA RD & NUFFIELD ST, New Market, AUCKLAND, New Zealand
Telephone : (09) 978 5050
Fax Num. : (09) 978 5070
Project Architect Mark OakleyChecked
Drawn by PR

Tatrod Design Group Limited
Architects and Interior Designers
4 Napier Street, Box 6555, St Ms, Auckland.
Tel 04-385 9787 Fax 04-385 1838

Other Consultants
Structural Engineer
Bacon Corlett Holdings & Farren Ltd
Tel 04-473 7551 Fax 04-473 7511
Services Engineer
Montgomery Watson NZ Ltd
Tel 04-381 6700 Fax 04-381 6738

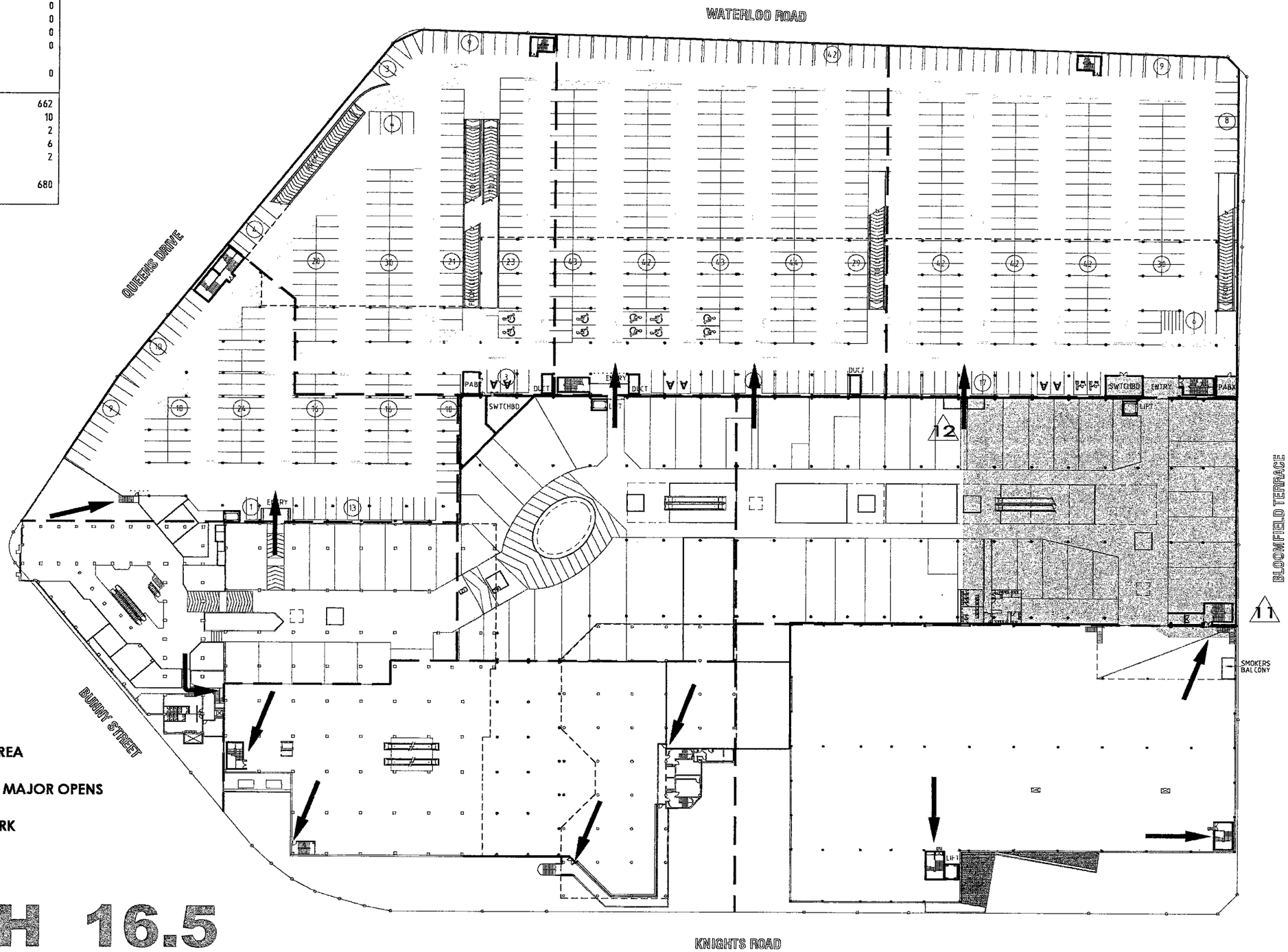
Project: QUEENSGATE REDEVELOPMENT

Title: LEVEL 2 - MONTH 15
STAGED CONSTRUCTION FIRE EGRESS PLAN

Scale	Project/Job Number	Computer Ref.	Drawing Number
1:500	02035	L2M15-egress	FEL2-15
Library Ref. J:/OG/	Scheme 35	Date Plotted 13/12/02	Revision 1

CAD FILE J:\OG\Construction\Staged Fire Egress Plans\L2M15-egress.dwg - 13/12/02 - 12:24PM

TOTAL NUMBER OF CARPARKS =		680
(EXCLUDING TROLLEY BAYS) FOR LEVEL :		2
17/06/2002		
EXISTING CARPARKS	=	0
EXISTING DISABLED CARPARKS	=	0
EXISTING PARENT & PRAM CARPARKS	=	0
EXISTING AUTHORITY CARPARKS	=	0
EXISTING TROLLEY BAYS	=	0
TOTAL NUMBER OF EXISTING CARPARKS (EXCLUDING EXISTING TROLLEY BAYS)	=	0
NEW CARPARKS	=	662
NEW DISABLED CARPARKS	=	10
NEW PARENT & PRAM CARPARKS	=	2
NEW AUTHORITY CARPARKS	=	6
NEW TROLLEY BAYS	=	2
TOTAL NUMBER OF NEW CARPARKS (EXCLUDING NEW TROLLEY BAYS)	=	680



= CONSTRUCTION AREA

11 = STAIR OPEN WHEN MAJOR OPENS

12 = EGRESS TO CARPARK

MONTH 16.5

STAGED CONSTRUCTION FIRE EGRESS PLAN

PRELIMINARY

NOTE
ALL DIMENSIONS TO BE CHECKED ON SITE.
WRITTEN DIMENSIONS ONLY TO BE USED.
REFER TO ALL DETAIL DWGS, STRUCTURAL MECHANICAL & SERVICE DWGS BEFORE COMMENCING WORK.
REFER ANY DISCREPANCIES TO ARCHITECTS.

CAD FILE NO J:/QG/Construction Staging/Staged Fire Egress Plans/L2M16.5-egress.dwg - 13/12/02 - 12:24PM

Rev.	Date	By	Description	Rev.	Date	By	Description	Rev.	Date	By	Description
1	13/12/02	PR	PRELIMINARY ISSUE								

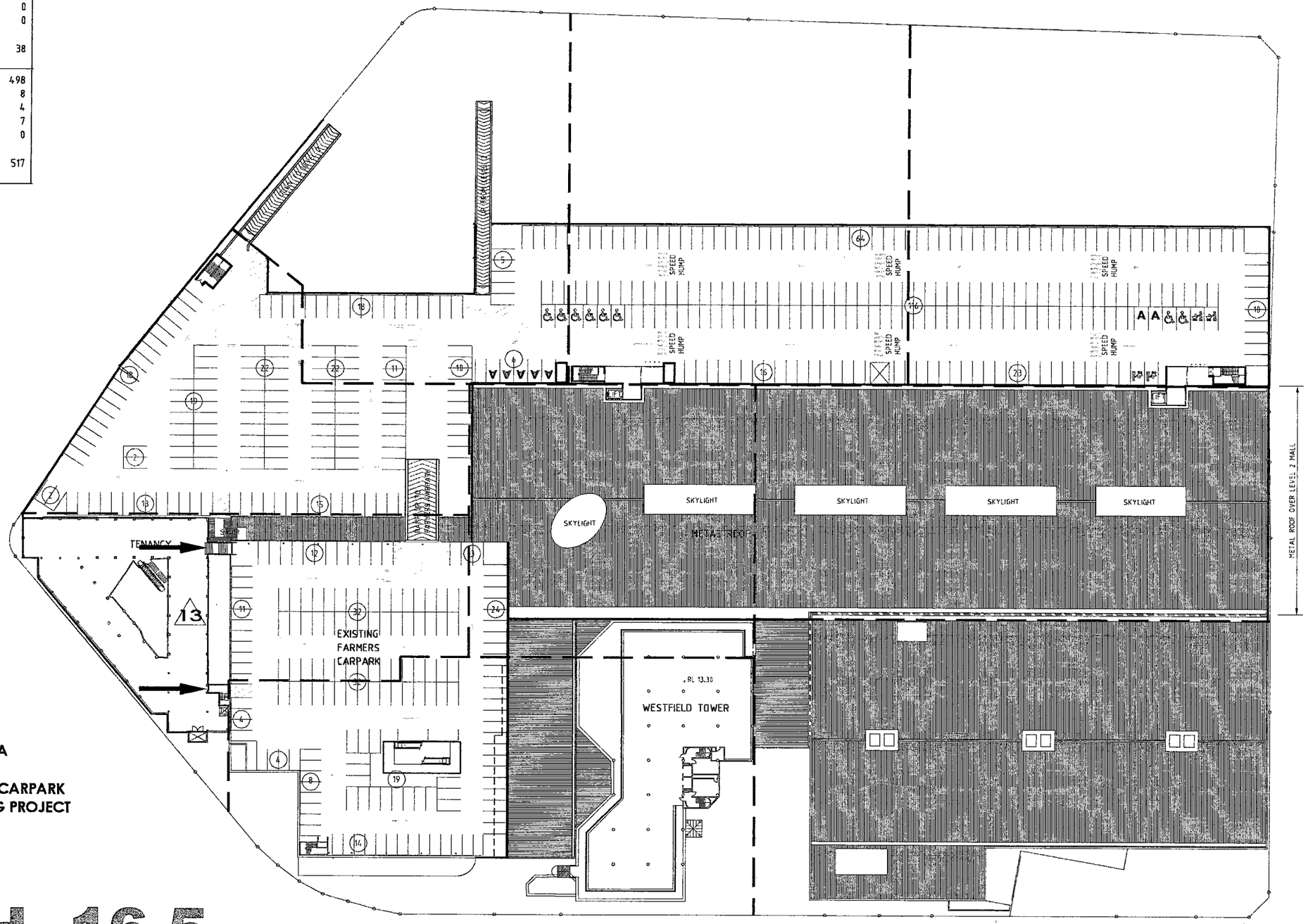
Westfield (New Zealand) Limited
L3 cnr REMUERA RD & NUFFIELD ST,
New Market, AUCKLAND, New Zealand
Telephone : (09) 978 5050
Fax Num. : (09) 978 5070
Project Architect Mark OakleyChecked

Drawn by PR

Other Consultants
Structural Engineer
Beca Carter Hollings & Ferner Ltd
Tel 04-473 7551 Fax 04-473 7911
Services Engineer
Montgomery Watson NZ Ltd
Tel 04-381 6700 Fax 04-381 6738

Project QUEENSGATE REDEVELOPMENT	Scale 1:500	Project/Job Number 02035	Computer Ref. L2M16.5-egress	Drawing Number FEL2-16.5
Title LEVEL 2 - MONTH 16.5 STAGED CONSTRUCTION FIRE EGRESS PLAN	Library Ref. J:/QG/	Scheme 35	Date Plotted 13/12/02	Revision 1

TOTAL NUMBER OF CARPARKS =		555
(EXCLUDING TROLLEY BAYS) FOR LEVEL :		3
05/07/2002		
EXISTING CARPARKS	=	38
EXISTING DISABLED CARPARKS	=	0
EXISTING PARENT & PRAM CARPARKS	=	0
EXISTING AUTHORITY CARPARKS	=	0
EXISTING TROLLEY BAYS	=	0
TOTAL NUMBER OF EXISTING CARPARKS (EXCLUDING EXISTING TROLLEY BAYS)	=	38
NEW CARPARKS	=	498
NEW DISABLED CARPARKS	=	8
NEW PARENT & PRAM CARPARKS	=	4
NEW AUTHORITY CARPARKS	=	7
NEW TROLLEY BAYS	=	0
TOTAL NUMBER OF NEW CARPARKS (EXCLUDING NEW TROLLEY BAYS)	=	517



= CONSTRUCTION AREA

13 = 2x EGRESS PATHSTO CARPARK MAINTAINED DURING PROJECT

MONTH 16.5

STAGED CONSTRUCTION FIRE EGRESS PLAN

PRELIMINARY

NOTE
ALL DIMENSIONS TO BE CHECKED ON SITE. WRITTEN DIMENSIONS ONLY TO BE USED. REFER TO ALL DETAIL DWGS, STRUCTURAL MECHANICAL & SERVICE DWGS BEFORE COMMENCING WORK. REFER ANY DISCREPANCIES TO ARCHITECTS.

Rev.	Date	By	Description	Rev.	Date	By	Description	Rev.	Date	By	Description
1	13/12/02	PR	PRELIMINARY ISSUE								

Westfield (New Zealand) Limited
L3 cnr REMUERA RD & NUFFIELD ST, New Market, AUCKLAND, New Zealand
Telephone : (09) 978 5050
Fax Num. : (09) 978 5070
Project Architect Mark OakleyChecked

Tolmod Design Group Limited
Architects and Project Managers
4 Hobson Street, Box 6884, Wellesley Street, Auckland, New Zealand.
Tel 04-383 6182 Fax 04-385 1638
Drawn by PR

Other Consultants
Structural Engineer
Bonn Carter Hastings & Fenner Ltd
Tel 04-473 7931 Fax 04-473 7911
Services Engineer
Montgomery Watson NZ Ltd
Tel 04-381 6730 Fax 04-381 6739

Project	QUEENSGATE REDEVELOPMENT				
Title	LEVEL 3 - MONTH 16.5 STAGED CONSTRUCTION FIRE EGRESS PLAN	Scale 1:500	Project/Job Number 02035	Computer Ref. L3M16.5-egress	Drawing Number FEL3-16.5
		Library Ref. J:/QG/	Scheme 35	Date Plotted 13/12/02	Revision 1

CAD FILE No. J:\QG\Construction Staging\Staged Fire Egress Plans\L3 M16.5-egress.dwg - 13/12/02 - 12:22PM

G – Site Specific Environmental Health & Safety Management Plan

Westfield Properties
(New Zealand) Limited

Westfield New Zealand

Site Specific Environment Health & Safety Management Plan for the Queensgate Redevelopment Project

1. **PREAMBLE**

2. **PROJECT DETAILS/CONTACT INFORMATION**
   Project Office Details
   Normal Working Hours on the Project
   Project Manager
   Westfield Site Details
   EH&S Facilitator
   Emergency Phone Numbers

3. **SITE PLAN**

4. **INTRODUCTION**

5. **DOCUMENT REVIEW, REVISION, AND ISSUE**

6. **ENVIRONMENT HEALTH & SAFETY POLICY**

7. **SITE SAFETY RULES**

8. **ROLES AND RESPONSIBILITIES (WESTFIELD)**
   Project Manager
   Site Manager
   Contract Manager
   Environment, Health & Safety Facilitator
   Site Supervisors
   Site Personnel
   First Aid personnel
   Specialty Shops Co-ordinator

9. **ROLES AND RESPONSIBILITIES (CONTRACTORS)**

10. **VISITORS TO SITE**

11. **SITE REGISTRATION/OH&S INDUCTION**

12. **EVACUATION PROCEDURE**
    Evacuation Procedure
    Evacuation Warning Device
    Evacuation Method
    Treating Injuries

13. **ACCIDENT/INCIDENT INVESTIGATION**

14. **FIRST AID**
    Provision of first aid on site
    Documentation
    Referrals

15. **HAZARD IDENTIFICATION, RISK MANAGEMENT & CONTROL**
    Responsibilities

16. **CONSULTATIVE ARRANGEMENTS/ISSUE RESOLUTION**

17. **SITE SAFETY COMMITTEE**

18. **PERMITS**

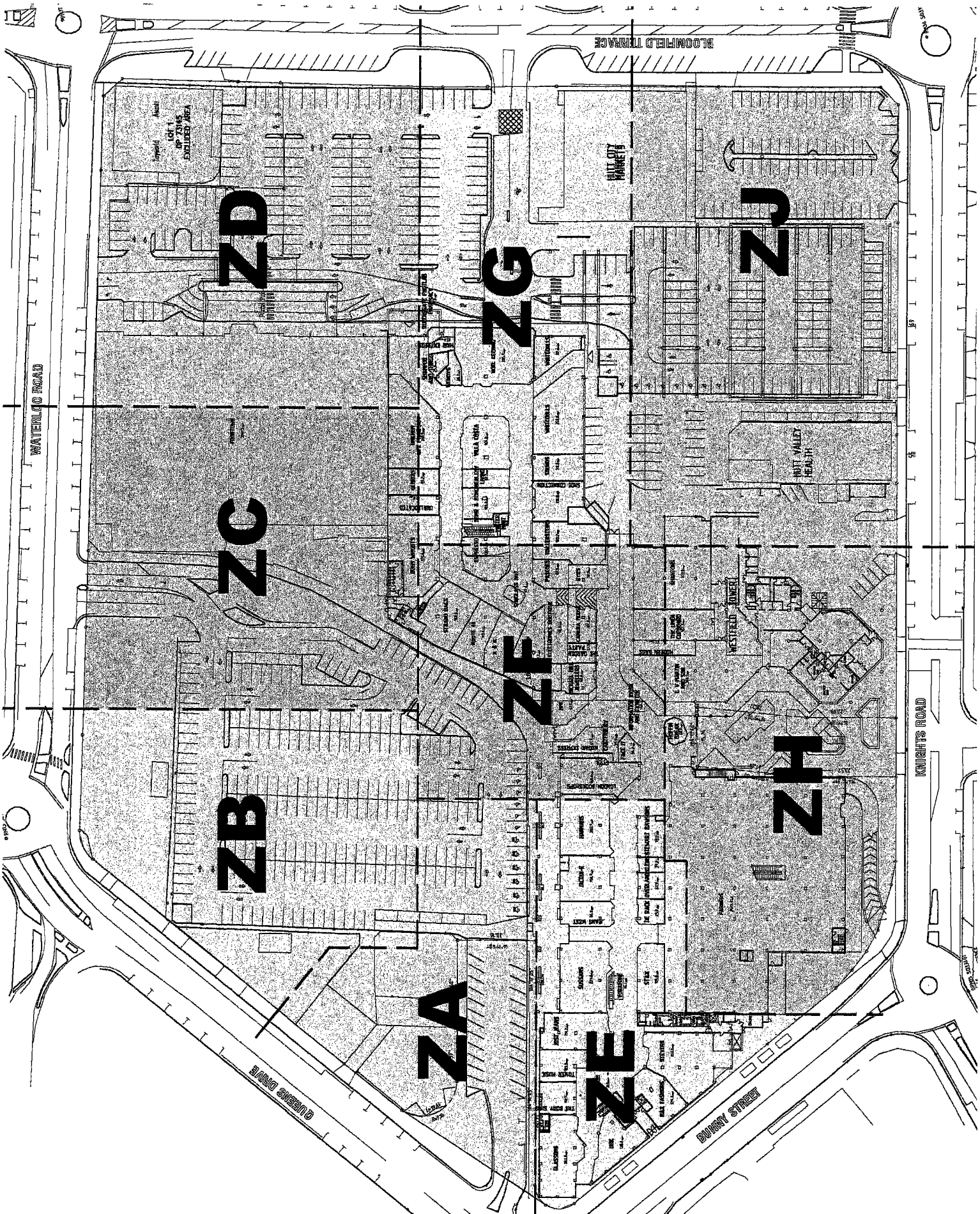
1. Preamble

Westfield Queensgate is located within the Hutt City Central business district and is currently comprised of 70 specialty stores in approximately 20,000.m2 of lettable retail space.
A major redevelopment is underway which will see the staged demolition of the existing centre with new car parking, food halls and new two level specialty shop tenancy areas.

2 Project Details/Contact information

Project Office Details:		Level 1 Westfield Tower 45 Knights Road Lower Hutt	
Telephone:		**04 922 3532**	
Facsimile:		**04 922 3547**	
Normal Working Hours on Project			
		Monday – Friday Saturday	7.00am to 6.00pm 7.00am to 5.00pm
Project Manager	**TBA**	04 922 3530	Mob TBA
Site Manager	**Paul Wood**	04 922 3542	Mob 021 743 319
EH&S Facilitator	**TBA**	04 922 3548	Mob TBA
First Aid	Location to be advised		
Emergency Numbers		**111**	

Police Station:	Lower Hutt		(04) 560 2600
Hospital:	Hutt Valley Health	(04) 5666 999 **or call ambulance on 111**	
Medical Centre:	**After Hours Medical Centre** 729 High St Lower Hutt (Mon-Frid 5pm to 7.45am) (Weekend- 24 hours)		(04) 567 5345
Fire Brigade:	**(Emergencies 111)**		
General Information		National Service Centre	(04) 496 3600
Services:	**Hutt City Council**		(04) 570 6666
	Water:	**Wellington Regional Council**	(04) 499 4444
	Gas:	**Natural Gas Corporation**	(04) 576 8700
	Sewage:	**Hutt City Council**	(04) 570 6666
	Electricity:	**United Networks**	0800 948100
	Phone/Data:	**Telecom**	125 for faults 124 for Cable locations
		Telstra	0508 555 500



LEVEL 1 - EXISTING SITE PLAN
CONSTRUCTION ZONES A-J

4. Introduction

This Westfield New Zealand **(Westfield)** project specific Environment Health, & Safety Management Plan **(EH&S Management Plan)** has been developed to provide a standardised approach to EH&S management on the Queensgate Redevelopment Project. This will assist in protecting persons on the Queensgate Project, others affected by the project, and the local environment, against environmental health and safety risks arising out of the redevelopment.
It sets out the project specific EH&S resources, responsibilities and procedures or practices for the Queensgate project.

This EH&S plan is to be explained and made readily available at the site induction.

5 Document Review, Revision and Issue

The Project Manager is responsible for:

☞ Completing this EH&S Management plan and keeping it maintained and up to date during the course of the project.

☞ Notwithstanding the above, reviewing this EH&S Management plan at intervals of not more than one month to ensure it is up to date.

☞ Ensuring that a copy of the EH&S management plan is available for inspection during the course of the project by:

- Safety committee members and employee representatives.
- Westfield contracts manager(s), who must provide it to all contractors **prior** to them starting on site. The contractor is then responsible to ensure that all their supervisors and employees are aware of this EH&S management plan, and comply with the requirements of such.
- Westfield supervisors and employees.

☞ Ensuring this EH&S management plan is referred to and explained during the site specific EH&S induction.

☞ Ensuring a record of revisions that occur are kept in the revision table below. All obsolete pages must be destroyed.

Revision ID	Revision Date	Section	Page	Revision Details
A	5/12/02	Two	4	Contact Details update.

Westfield
NEW ZEALAND

Design & Construction Department

Environment Health & Safety Policy

Westfield New Zealand is committed to ensuring the health, safety and welfare of all persons (including employees, contractors, Centre Management, retailing personnel and members of the public) at its workplaces.

To achieve this objective, Westfield New Zealand has in place and will improve continuously, a comprehensive EH&S Compliance System.

This System ensures the health safety and welfare of all persons by facilitating:

- **Compliance with all applicable legislation and regulations;**
- **Compliance with all building and construction standards and codes of practice;**
- **Adoption of a "best practice" approach to EH&S; and**
- **Integration of EH&S into all aspects of the company's planning and operations.**

In implementing this policy and this system, Westfield New Zealand will:

- **Identify potential work risks and hazards;**
- **Develop safe work procedures and programs;**
- **Provide appropriate induction, training and supervision;**
- **Develop appropriate emergency plans;**
- **Rehabilitate ill or injured workers;**
- **Establish workplace EH&S committees**
- **Adopt a consultative approach with employees, contractors, Centre Management and other affected groups concerning EH&S issues;**
- **Disseminate EH&S information;**
- **Document and apply consistently appropriate disciplinary procedures;**
- **Audit compliance with safe work procedures and programs; and**
- **Provide adequate resources in order to implement this policy and this System.**

Project Managers, Site Supervisory staff, safety facilitators, employees of Westfield New Zealand, contractors and employees of contractors will be held accountable for EH&S performance within their own areas of control.

Westfield New Zealand is committed to the ongoing implementation of this policy and will monitor and review its effectiveness regularly.

John Widdup
Director
Westfield New Zealand

Greg Douglas
General Manager Construction
Westfield New Zealand

7. Site Safety Rules

EMPLOYEE SITE CONDUCT- employee behaviour on site shall not offend, upset, or harass other employees, the customers, centre management staff, tenants or the public.

DRUGS & ALCOHOL – drugs or alcohol shall not be allowed on site.

SMOKING – Smoke free zones are to be observed on site and in the Shopping Centre.

SAFETY HELMETS – all persons are to wear an approved safety helmet when in designated construction areas of Westfield projects.

HIGH VISIBILITY CLOTHING – all person are to wear high visibility clothing or vests at all times when in designated construction areas of Westfield projects unless otherwise directed by Westfield.

FOOTWEAR – appropriate safety shoes or boots are to be worn by all persons while on site.

INJURIES – It is every individual's responsibility to ensure that any injury they receive is reported to the site First Aid Facility for treatment and recording in the site Register of Injury.

PLANT & EQUIPMENT – only authorised persons who have a current certificate of competency, or are in training or under the direct supervision of a competent person, are to operate, or erect prescribed plant and equipment. If in doubt **ASK YOUR SUPERVISOR.**

ELECTRICAL EQUIPMENT – no persons shall interfere with electrical equipment or wiring at any time unless authorised by their company and are a qualified electrician. All electrical equipment must have a current Electrical Tag in compliance with relevant legislation and be protected by a core balance earth leakage device.

PERMITS – any permit required to be issued by Westfield must be obtained **prior** to works commencing. All conditions attached to such permits must be complied with. If you are not sure which activities require a permit **ASK YOUR SUPERVISOR.**

AM/FM RADIOS AND CD PLAYERS – the use of AM/FM radios, walkmen and portable cd players are not permitted on Westfield work sites at any time.

COMPRESSED AIR – do not use compressed air to blow dirt from hands, hair or clothing; it is very dangerous to fool with compressed air or blow it at any other person.

HOUSEKEEPING – stack materials and waste in safe locations. All exits walkways and stairwells must be kept clear at all times.

SAFETY SIGNS – site workers must observe safety signs on all occasions. The signs are erected for your safety.

REPORTING HAZARDS – unsafe acts or conditions must be reported to your Supervisor or to the Site Safety Staff immediately.

HORSEPLAY – no employee shall conduct themselves in a manner which is likely to cause or create a risk of accident or injury to themselves or others.

GLASS BOTTLES – are not permitted in the workplace.

CAR PARKING – shall not be permitted on site without approval of the Project Manager.

ANY PERSON FOUND TO BE IN BREACH OF THE FOLLOWING SITE RULES MAY BE REMOVED FROM SITE WITHOUT WARNING.

URINATING or defecating anywhere other than the toilets provided

THIEVING anything form site or the shops on which you may be working.

REMOVAL of handrails, guardrails or fences without authority.

FIGHTING with any other person on the project

REFUSING to comply with safety instructions, rules or regulations.

INTERFERING, DAMAGING, VANDALISING any safety equipment or amenities

ANY OTHER SERIOUS BREACH of health & safety rules and regulations.
(As deemed so by Westfield Project Manager).

8. Roles and Responsibilities (Westfield)

Westfield will co-ordinate the overall safety matter relating to the project, but this does not relieve the contractors of their responsibilities relating to their personnel and to any person put at risk by the contractors acts or omissions arising from their works.
Westfield will provide the following key personnel whose roles and responsibilities regarding safety on the project are:

Project Manager

The project manager is responsible to ensure the requirements of this EH&S management plan are implemented and maintained. The project manager must ensure that their staff complies with their EH&S responsibilities as detailed below. They must monitor compliance to this EH&S management plan and take corrective action where the responsibilities are not being carried out. In addition to the above they must ensure:

- All site personnel including sub-contractors, on the site clearly understand and carry out their EH&S responsibilities.
- Accidents and near hits are promptly reported and investigated. This includes reporting all notifiable accidents/incidents to the appropriate Authorities.
- Relevant Statutory requirements and standards are complied with.
- Site specific hazards are identified and specific procedures are formulated where necessary to combat the hazards identified.
- The effectiveness of accident control measures are assessed and evaluated.
- The works being carried out do not create a risk to the health and safety of the general public

Environment, Health & Safety Facilitator.

The roles and responsibilities of the project environment, health & safety facilitator (s) shall be to:

- Act as facilitator for the project in matters concerning risk assessment, prevention of accidents, injuries, hazards and the promotion of health and safety.
- Develop, implement and monitor the emergency procedures required on site, in conjunction with the safety committee/project management and local emergency services as appropriate.
- Ensure all new starters on the project complete a site registration form prior to commencing work on the project. This task may be delegated to another person depending upon the size of the project (site clerk).
- Act as adviser to the safety committee/reps as required.
- Act as the point of reference for the project in regard to all environment health & safety matters arising on the project.
- Monitor and regularly report to the project manager on all EH&S matter arising on the project
- Be present for EH&S inspections. These may include safety committee/rep's inspections task specific inspections or inspections by legislative bodies.
- Investigate accidents and near hits on the project, and promptly report them to the project manager.
- Be appointed as a member of the site safety committee and attend committee meeting and other meetings where health & safety matters relating to the project are discussed or considered
- Co-ordinate appropriate EH&S training in conjunction with the project management. This may include accredited safety induction's, site specific induction's and any other EH&S training applicable to the site.
- Liase with the site first aider to ensure that the first aid facilities are maintained in a satisfactory condition and that ambulance, casualty and medical facilities are available as required.
- General promotion of environment, health & safety on the project.

Contract Manager

The contract Manager is responsible for administering, and therefore ensuring administrative compliance with the EH&S contract conditions. This includes ensuring that all contractors understand the Westfield EH&S contract conditions, **prior** to them being awarded the contract. Initially this will involve sitting down with the contractors **prior** to awarding them the contract and ensuring that all aspects of the EH&S requirements are fully understood by the contractors.

Note: The EH&S Facilitator on site will be available to give assistance and advise on the practical aspects of the EH&S requirements and should be involved in the process from the outset.
The contract manager should clearly point out the statutory and company requirements for EH&S and the disciplinary action that may be taken should the contractor/subcontractor or their employee's breach such requirements.

Site Supervisors (including Site Managers)

Site supervisors shall ensure that they are directly involved with safety on site because they have the best knowledge of work practices carried out by the contractors and site personnel directly under their control.

The prime EH&S function of the site supervisor is to ensure the safety and health of the site personnel and the general public is not compromised by construction site activities.

The requirements of production and those of safety should not normally present conflicting demands. However, if conflict does arise, site supervisors shall ensure that the safety and health of all concerned is paramount

Site supervisors must exercise their EH&S responsibilities to site personnel directly under their control by:

- Having a thorough knowledge of this EH&S management plan and relevant legislation.
- Consistently enforcing safety instructions in accordance with legislative requirements and this EH&S management plan.
- Being responsible for isolating unsafe work areas, materials, plant & equipment etc. until the hazard creating the risk is controlled.
- Ensuring good housekeeping procedures are followed and providing overall supervision of persons under their control to ensure the health and safety of site personnel, the public and visitors to site.
- Making sure the appropriate protective devices are installed intact on machines, and are operating effectively.
- Being alert to detect hazardous acts and conditions in the workplace, and initiating corrective or preventive actions as appropriate.
- Encouraging participation in safety activities.
- Monitoring personnel in safety activities.
- Monitoring personnel wearing personal protective equipment (PPE) where required.
- Ensuring that all injuries (regardless of severity) are promptly reported to and treated by the First Aider.
- Notifying and reporting accidents and "near hits" to Westfield immediately, so that they may be investigated accordingly.
- Ensuring Contractors and site personnel under their control clearly understand their responsibilities for production with safety.
- Correctly supervising hazardous operations, especially tasks that are not part of routine activities.
- Giving specific, thorough safety instructions to contractors and personnel when directing them to carry out an operation.
- Planning for health & safety in the works they are carrying out.
- Setting a good personal example
- Enforcing statutory requirements and site safety rules.

- Administering discipline where safety rules are broken.
- Constantly reviewing and correcting unsafe acts and conditions and taking prompt action to rectify any that are found. Personally attending safety inspections etc that are relevant to their work area.
- Personally attending safety inspections etc that are relevant to their work.
- Staying conversant with emergency procedures.
- Liasing with the appropriate persons on matters concerning risk assessment, prevention of accidents, injuries, hazards, Government legislation, Australian/ NZ standards, Codes of Practice etc
- It is important the supervisors give specific thorough safety instructions at the same time issuing general work instruction. Supervisors are legally responsible for the ACTS and OMISSIONS of the site personnel working under their control.

Site Personnel

As employees all personnel on site have a duty under the Health & Safety in Employment Act 1992 to take all practicable steps to ensure their own safety while at work and that no action or inaction of theirs causes harm to any other person.
To enable this to be done employees must:

- Observe and comply with all legal requirements, Regulations, Codes of Practice and safety rules that apply to the work they are doing, or that they are directed to work by.
- Be sober and not take drugs at work that means that they will not have full use of their senses thereby endangering the lives of themselves and others.
- Report immediately any unsafe conditions or practices to your supervisor. (This is not "Dobbing in" - it could save lives and/or injuries.)
- Promptly report all personal injuries to the First Aider.
- Co-operate with all activities/training, which are designed to prevent accidents.
- Supervisors must ensure that all employees working under their control are aware of their responsibilities and that they fulfil them at all times.
- Site personnel have responsibilities to take all reasonable action to look after their own EH&S. This means don't carry out unsafe practices. **If in doubt – ask.** Check equipment prior to commencing any tasks and complete logbooks etc as required.

First Aid Personnel

The first aider's principal responsibility is to treat all wounds and injuries that may occur, including dealing with fits, fainting, resuscitation etc. and to record all accident/ injury details in the first aid recording book.
Other duties and responsibilities shall include:

- Dispense and control items form the first aid facility.
- Ensure all first aid supplies are adequate.
- Advise site management immediately of any serious or potentially serious accident for which treatment has been required.
- Liase with EH&S Facilitator to establish and maintain emergency procedures and facilities.

Provide regular updated reports of the injury/illness statistics to the Westfield project manager.

Specialty Shops Co-ordinator.

The EH&S aspects of the tenants works must be managed in accordance with the Westfield fitout requirement booklet

In summary this is:

- The lessee must comply with all applicable EH&S laws, statutes, regulations and by-laws and all applicable codes of practice, standards and the recommendations or instructions of manufacturers /suppliers.
- Without limiting the tenants obligations, prior to staring the tenants works the tenants must

- Establish and implement a written EH&S management system.
- Request Westfield to advise what permits Westfield requires and works in accordance with all such permits.
- Ensure that all persons engaged in carrying out the tenants works have been instructed regarding the EH&S requirements of the relevancy State or Territory Authorities.
- Observe and perform and cause all persons engaged in carrying out the tenants works to observe and perform obligations imposed by the Authorities.
- Ensure all incidents / accidents that have to be notified to the Authorities are reported to the Authorities and to Westfield immediately.
- The tenant must be provided with a document which is titled "Occupational Health & Safety Guide for Merchants and Fitout Contractors" prior to the commencement of the tenants works. The tenant must acknowledge that this is a guide only and the tenant agrees, without limiting its obligations and responsibilities in relation to EH&S, to comply with this document.

Auditing

Westfield may at any time audit the fitout works to monitor compliance with the fitout requirements. Such audits will be carried out, documented and filed appropriately on site.

9. Roles and Responsibilities (Contractors)

Contractors must at all times, exercise all necessary precautions for the safety of all persons on the site or within the shopping centre and environs. Without limiting the above:

☞ Contractors must at all times co-ordinate their works with Westfield and other contractors, and ensure that their personnel are not directed to or expected to, and do not undertake any work activities which might create a risk to the health, safety or welfare of themselves or others.

☞ Contractors must obtain all permits required by Westfield for carrying out their works and work in accordance with all such permits.

☞ Contractors must undertake regular EH&S inspections to determine if there are any unidentified or new risks, or if there are any amendments required to their EH&S management system.

☞ Contractors must have a suitable qualified supervisor who has responsibility for their works on the site ; and must:

- Be competent in all EH&S matters pertaining to their works; and
- Be present on site at the times their personnel are undertaking works on the site; and
- Attend all EH&S meeting and inspections, lectures or their similar meeting as required by Westfield; and
- be responsible for recording and reporting to Westfield any EH&S information it requires

10. Visitors to Site

☞ This procedure applies to all visitors to Westfield sites, including, but not limited to; Authorities (Council, Gas, Electrical, telecommunications etc.), visiting Westfield (Including Head Office and Support Office) Staff, consultants, contractors staff, leasing staff, tenants (including potential tenants) and their consultants or contractors.

☞ All visitors must report to the project site office to register, **prior**, to going onto site. This involves being issued with a visitors pass and signing in the site visitor register.

- A prerequisite to being issued with a visitors pass and signing in is that visitors are wearing appropriate footwear. This is **"stout enclosed footwear with a flat slow and low heel".** Also visitors must wear approved hard hats and high visibility clothing or vests at all times they are in the construction areas of the site. If the visitor does not have a hard hat, vest or high viz clothing, Westfield will provide one, which is identified as a visitor's hat.
- Depending upon the stage of the project or the specific area the visitor is on site to visit, additional personal protective equipment may be required, such as hearing protection, safety glasses etc. The key personnel should seek clarification of what is required from the EH&S facilitator or other site staff as appropriate if they are not sure.

11. Site Registration/EH &S Induction

All site personnel must complete a site registration at the induction room, which is located at the construction office, level 1, 45 Knights Road, prior to starting work on site.

Westfield will not direct, and will take all reasonably practicable steps to prevent persons from carrying out construction work on the project, unless Westfield is satisfied that the person has undergone EH&S induction training including:

- A ***"Site Safe Induction Passport"*** training session which is aimed at giving all people a basic understanding of their legal responsibilities under the Health and Safety in Employment Act and an understanding of the basic hazards of the industry.
  The primary responsibility for this induction training lies with the person's employer.

- A ***"Work Activity"*** EH&S induction by their employer into the employers EH&S management system for the project which is intended to provide employees with adequate information on their employer planned safe method of performing the contract work.
  The primary responsibility for this induction training lies with the person's employer.

- A ***"Site Specific"*** EH&S induction which is intended to provide all persons who carry out construction work (including current employees commencing on a new work site) with knowledge of the EH&S procedures, hazards and risks of a particular workplace or site.

Westfield will provide a site induction each day at 7.30am, in the induction room, which is located at the construction office level 1, 45 Knights Road

12. Evacuation Plan.

The Queensgate redevelopment evacuation assembly areas will be on the opposite sides of Waterloo and Queens Drive to ensure no hindrance of the emergency services.
The following procedures are to be carried out, developed and maintained during the shopping centre refurbishment works. A copy of this evacuation procedure is to be displayed in each lunch room/site shed and on the site notice boards.

Evacuation Procedure.

- Evacuation of the site is to carried out when an emergency develops that may endanger the lives of employees, i.e. gas and chemical leaks, fire, explosions, bomb threats etc.

- The decision to evacuate the workplace shall be made by the Project Manager or their appointed nominee.

Evacuation Warning Device

- Following the decision to evacuate the site, the project Manager or their appointed nominee will contact the Westfield supervisor to initiate.
- A sound warning system will be installed on the roof of the gatehouse. The signal will be the continuous sounding of the siren, which will be activated by the first aid officer (security guard?). The all clear will be given via the site radios.
- If the emergency has originated inside the operational area of the Shopping Centre, which will require evacuation of construction personnel in the Centre, they will evacuate from the Shopping Centre building via the nearest safe exit upon the sounding of the Centre alarm and report to the assembly area.

Evacuation Method

- Following the decision to evacuate the project site, all employees are to leave work areas immediately by the nearest safe exit and make their way to the nominated assembly areas (refer to site plan) in an orderly manner via the routes indicated on the plan.
- Westfield Site Manager and foremen are to be responsible for evacuating their areas of responsibility.
- Nominated representative, EH&S facilitator or nominated replacement will co-ordinate all evacuation procedures.
- Westfield representatives and contractors are to ensure all their employees are evacuated and accounted for at the evacuation points.
- During evacuation procedures please keep radio channels clear at all times, messages are to be short and clearly transmitted. During an evacuation, stay on one nominated channel so that everyone is aware of what is happening.

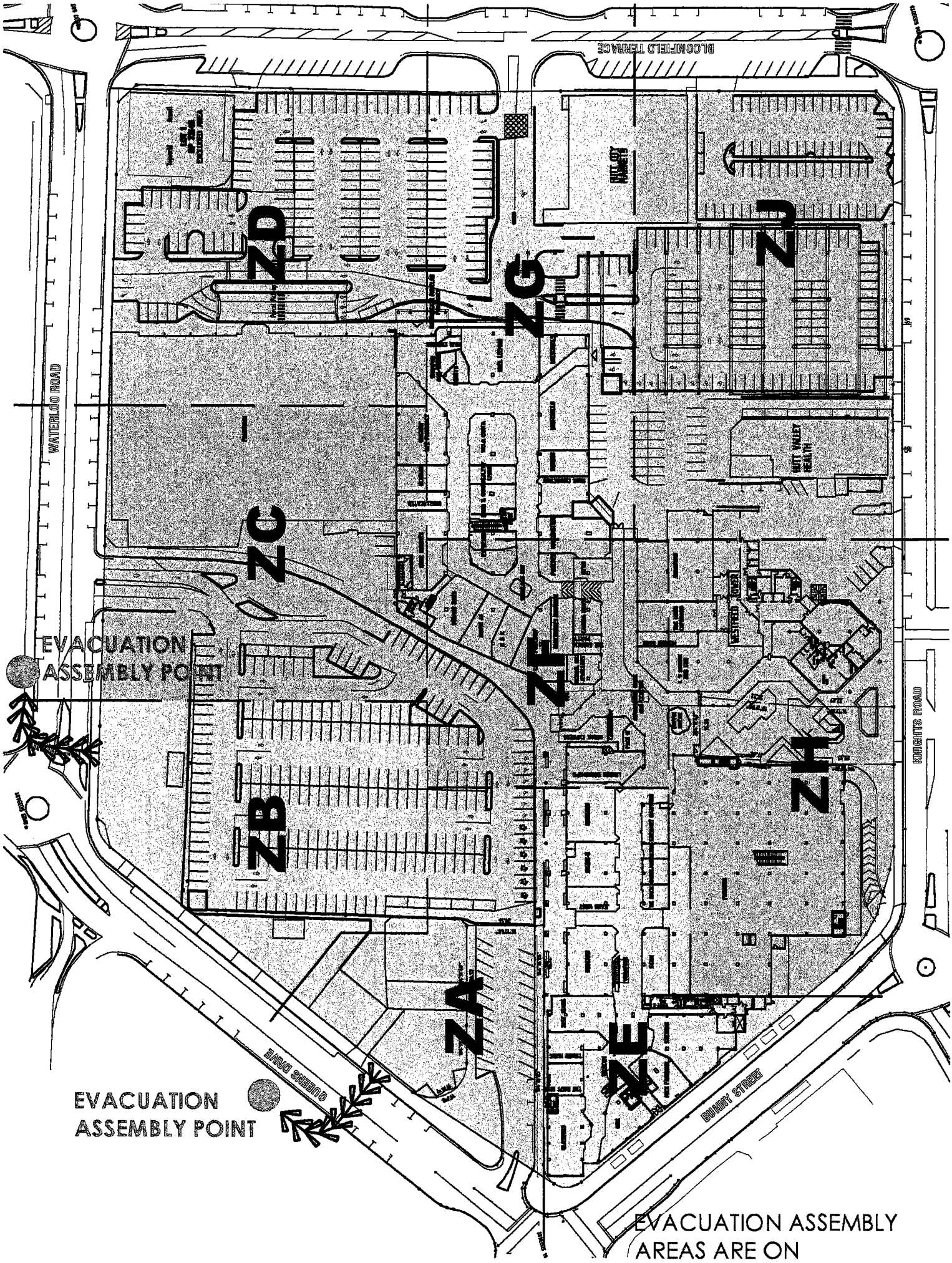
REMEMBER –Don't become a casualty. Leave the rescuing to the people who are trained. (Fire Brigade, etc)

Treating Injuries

- Injured persons are to be treated and evacuated by trained personnel only.

Follow the above procedures and minimise further injuries by not panicking.

Do not leave the assembly area until the all clear has been given and instructed to by a Westfield Supervisor



EVACUATION ASSEMBLY AREAS ARE ON OPPOSITE SIDES OF WATERLOO ROAD AND QUEENS DRIVE

EVACUATION PLAN
LEVEL 1 - EXISTING PLAN

13 Accident/Incident Investigation

Accident /incident investigation and reporting are an essential part of managing EH&S on the project. It provides and indication that something has gone wrong and that there may have been a deviation from the agreed procedure.
Accidents/incidents are the unwanted side effects of the production system. Therefore, a good accident investigation aims to establish the sequence of events, which actually took place so that this can be compared to what should have taken place. The discrepancies revealed by this comparison are areas where changes are needed to prevent a recurrence of the incident.

THE OBJECTIVE OF ACCIDENT INVESTIGATION IS TO FIND THE TRUE CAUSE NOT TO APPORTION BLAME – PREVENTION NOT PERSECUTION

The scope of the investigation largely depends on the seriousness or complexity of the accident/incident. Investigators should only perform the tasks that are necessary to identify the facts and factors. It is essential not to jump to conclusions about what people **think** must have happened. The true **fact** of the matter must be obtained.

All work related accidents, incidents or dangerous occurrences must be investigated. Investigate "near hits" as they have the potential to cause personal injury or property damage if they occur again in slightly different circumstances.

The project manager is responsible for ensuring all notifiable accidents/incidents/dangerous occurrences, are reported to the appropriate Authorities.
The EH&S facilitator is to provide competent assistance in developing and training the relevant site personnel in investigation techniques as required. The EH&S facilitator will play a pivotal role in effectively investigating and documenting accidents/incidents/ dangerous occurrences as soon as practicable after the occurrence, and to promptly report them to the project manager.
All site personnel are to make themselves familiar with and understand the requirements for accident /incident reporting. They must report **all** accidents and near hits to their supervisor for investigation if required.

14 First Aid

Provision of First Aid on Site

Westfield will endeavour to provide first aid facilities at all times works are undertaken on the project.**This does not remove the obligation by contractors to provide their own first aid facilities as stated in the Health and Safety In Employment Regulations 1995 and OSH guidelines**. Any works planned to be undertaken outside normal site working hours **must** be notified to Westfield a minimum of **24 hours prior** to such work commencing.
The site first aider must have a current certificate of competency to provide first aid treatment on the project. A training authority which is recognised under relevant State/Territory Regulations, (e.g. St Johns Ambulance/Red Cross) must issue this certificate.
The site first aid personnel are responsible to:

- Treat all wounds and injuries that may occur, including dealing with fits, fainting, resuscitation etc. and accurately record all accident/injury details in the first aid register.
- Dispense and control items from the first aid facility.
- Ensure all first aid supplies are adequate.
- Advise site management immediately of any serious or potentially serious accident for which treatment has been required.
- Liase with occupational health and safety facilitator to establish and maintain emergency procedures and facilities
- Provide regular upgraded reports of the injury/illness statistics to the project manager.
- Administer and maintain appropriate personal protective equipment for the works being carried out on the site.
- Any other first aids duties that may be assigned by the project manager.

Documentation

- The names of all Westfield site first aiders must be displayed at the first aid facility.
- Register of injuries. Legislation requires a register of all accident and injuries be kept at each site.
- Register of all medical referrals to medial clinic
- The Westfield treatment of injuries register must be accurately completed for each treatment carried out by the first aider.

Report all injuries, no matter how minor to the first aid facilities and documentation. Make the area supervisor aware of the injury

Referrals

- A "Medical Introduction" form will be issued if a patient requires further medical attention. (e.g. Doctor or Hospital etc.) This form must be filled out completely and given to the patient to take with them.

NO FIRST AID INFORMATION IS TO BE GIVEN TO ANYONE WITHOUT AUTHORISATION FROM THE PROJECT MANAGER.

15. Hazard Identification, Risk Assessment & Control

Responsibilities

The Health and Safety in Employment Act requires:

1) Persons in control of places of work (Westfield) to provide a safety management system that identifies all hazards likely to cause harm to people in the workplace; assesses the risk from such hazards; and develop control measures accordingly.
2) Employers (predominantly contractors on Westfield sites) to ensure that all hazards to their employees are identified, the risks involved assessed and controls put in place to either eliminate the hazard, isolate the hazard from the employees or the employees from the hazard, or minimise the employees exposure to the hazard. The use of personal protective equipment is seen to be a last resort.
3) Employees (site personnel) to take care for the health and safety of themselves and any other person who may be affected by their acts or omissions and to co-operate with their employer or person in control of the workplace.

Work activities involving Westfield employees are carried out in accordance with the Westfield OH&S Policy & Procedures Manual. This provides for existing and potential hazards to be identified, the risks from such hazards assessed; and control measures developed accordingly.

Contractors working on the Queensgate project are required to establish and implement an EH&S management system for their works. Where appropriate, their personnel should be consulted during the establishment of the EH&S management system for their works. This system must be provided in writing and shall be submitted to Westfield 24 hours prior to the contractor commencing on site. The system must include no less than the following:

- A statement setting out the contractors expertise to carry out their works
- The contractors EH&S policy
- The contractors EH&S risk assessment specific to their works
- The contractors safe work procedures and operating procedures specifically designed for carrying out their works
- The contractors program for the training of all their personnel in the carrying out of the works and operation of the EH&S management system
- The contractors audit procedure for each risk identified during the risk assessment process, including inspection program
- The EH&S roles and responsibilities of the contractors personnel
- The contractors occurrence investigations and reporting to Westfield
- The contractors EH&S personnel training and retraining

If there are any changes in the assessed risks or work methods, (as detailed in the contractors EH&S management system), the document reflecting the EH&S management system must be amended and the amendments provided to the project manager.

The above ensures that persons on the Queensgate project, and others affected by the project, are not exposed to risks to their health and safety arising from the contractors/sub contractors work.
All site personnel (i.e. employees) must comply with the site rules, and with all other requirements relating to the health & safety of personnel on the project.

16 Consultative Arrangements/ Issue Resolution

It is imperative to resolve EH&S grievances so that a working environment without EH&S risks can be maintained. The following procedure should be used to resolve any site EH&S issues:

1) If site personnel wish to raise an EH&S issue, the issue should first be discussed with the relevant site personnel's supervisor, Westfield area supervisor or Westfield site EH&S facilitator.
2) It the relevant site personnel's supervisor, Westfield area supervisor or Westfield site EH&S facilitator does not resolve the issue, the appropriate employee safety committee member(s) should be informed.
3) If the appropriate employee safety committee member(s), relevant site personnel's supervisor, Westfield area supervisor or Westfield safety facilitator cannot resolve the issue, then the issue shall be referred to the project manager(s).
4) If the resolution of the issue is still not obtained, then a meeting of the project safety committee will be convened.
5) If the project manager(s) do not act in accordance with the recommendations of the project safety committee and the issue remains outstanding, then an inspection and /or advice should be sought from the relevant EH&S authority.

17 Site Safety Committee

A site safety committee will be established and the members of such identified by stickers on their helmets.
The purpose of the site committee is to make **recommendations** about EH&S issues that affect employees on the Queensgate site. In summary, the purpose of the safety committee is to provide guidelines for the smooth running of safety on this project.
The safety committee primarily fulfils a monitoring and advisory role. Committee meetings which will be held weekly on site, provide the opportunity for consultation between employees and management.
The Safety committee will be set up for the purpose of dealing with matters related to workplace safety. This is the scope of the mandate. It should not be dealing with issues that are not related to occupational health & safety on site.
Members of the safety committee should be chosen considering knowledge, skills and experience they can contribute. The safety committee is part of the organisational framework set up to enable better management of occupational health & safety on site. The safety committee's role is:

- ☞ To resolve EH&S matters referred to it
- ☞ To identify EH&S problems;
- ☞ To develop, through consultation, appropriate preventative strategies (e.g the design and development of EH&S policies and programs).
- ☞ To co-operate in implementing these strategies; and
- ☞ To monitor the success of such strategies.

Minutes from the safety committee meetings will be displayed on the site notice boards and made readily available to all site personnel. The original copy will be kept on file in the Westfield project office.

18 Permits

Westfield requires permits to be used for the carrying out of the following works and such work must be carried out in accordance with the conditions attached to the permits:

- Permit for Confined Space Entry
- Demolition Permit
- Hot Works Permit
- Permit to Cut Concrete, Core Drill & Excavate

The Westfield Area Supervisors will issue the above permits for work in their areas.