



ASSOCIATION OF CONSULTING
ENGINEERS AUSTRALIA

PROPOSED DESIGNER DUTIES OF CARE IN A MODEL OHS ACT

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ACEA SUBMISSION

Nicola Grayson *National Policy Manager*

Neil Bassett *OHS Policy Officer*

L6/50 Clarence Street
Sydney NSW 2000

GPO Box 56
Sydney NSW 2001

P . 02 9922 4711

F . 02 9957 2484

E . acea@acea.com.au

W . www.acea.com.au

The Association of Consulting Engineers Australia (ACEA) is an industry body representing the business interests of firms providing engineering, technology and management consultancy services.

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INTRODUCTION

ABOUT THE ACEA

The Association of Consulting Engineers Australia (ACEA) is an industry body representing the business interests of firms providing engineering, technology and management consultancy services.

There are over 260 firms, from large multidisciplinary corporations to small niche practices, across a range of engineering fields represented by the ACEA with a total of some 46,000 employees.

The ACEA presents a unified voice for the industry and supports the profession by upholding a professional code of ethics and enhancing the commercial environment in which firms operate through strong representation and influential lobbying activities.

The ACEA also supports members in all aspects of their business including risk management, contractual issues, professional indemnity insurance, occupational health and safety, procurement practices, workplace/industrial relations, client relations, marketing, education, sustainability and business development.

EXECUTIVE SUMMARY

The ACEA would like to welcome the National Review Panel's first report to the Workplace Relations Ministers' Council and its recommendations for a model OHS Act. The ACEA would also like to congratulate Council of Australian Governments (COAG) in their commitment to adopt nationally consistent legislation.

The ACEA believes that the Review Panel's first report recommendations will increase consistency in OHS duties for business operators, all the while helping to improve the health and safety of all people, regardless of whether they are workers, visitors or the general public.

The ACEA strongly supports the recommendation that the test of "reasonably practicable" should be used to qualify the duties of care. In addition, the ACEA supports the recommendation that the onus of proving a breach of the duties should remain with the regulator. Both of these recommendations will ensure that the legislation is applied in a proportionate and appropriate manner, without compromising the aim of the legislation, which is to improve safety outcomes.

Whilst the ACEA in general terms supports the first report, the ACEA does have concerns relating to the proposed specific designer duties and set out below is a summary of those concerns:

- The assumption that designers of structures are qualified to provide advice on building processes regarding all phases of a structure, especially construction techniques.
- The implication that design is a simplistic one-dimensional activity that involves little input or influence from other key construction project participants, such as clients, contractors, superintendent, site management, resident engineer, client's representative, contract administrator and verifiers.
- The proposal that designers of structures will have an onerous specific duty of care to provide on-going information related to the design project as it becomes available throughout the lifecycle of a building project.
- The lack of specific duties of care imposed on clients in relation to construction and design management, which overlooks their level of control and influence over construction project participants.

In the following pages the ACEA provides guidance for policy makers to consider regarding duties of care for designers, the level of duty for designers, who designers owe a duty to, and how designer duties should be qualified for the development of the model OHS Act.

The ACEA acknowledges that the Review Panel will be conducting significant work on the second report, which may go some way to addressing these issues, especially surrounding key definitions, consultation and cooperation.

However given the specific reference to designer duties in the first report the ACEA has provided this initial response to provide some guidance as to the direction the second report might take. The ACEA will undertake further review once the second report is available.

REVIEW OF DESIGNERS SPECIFIC DUTIES OF CARE

WHO OWES A DUTY OF CARE?

1.1 National Review Panel recommendation 29

The model OHS Act should provide for separate duties of care owed by specific classes of person undertaking activities, as noted in recommendation 30, in relation to plant, substances or structures intended for use at work¹.

1.2 National Review Panel recommendation 30

The model OHS Act should provide for separate duties of care on the following classes of persons:

- a) designers of plant, structures or substances;*
- b) manufactures of plant, structures or substances;*
- c) builders, erectors or installers of structures; and*
- d) importers or suppliers of plant, structures or substances².*

1.3 Application to designers of structures

Engineering design is a complex activity that involves the use of technical and scientific knowledge, natural laws and physical resources that, when combined allow designers to design substances, plant and structures to meet desired specifications and objectives.

Designers of structures have been classified as specific duty holders in a number of jurisdictions because they undertake particular activities as part of their business functions (i.e. they design buildings that are used as workplaces). This means they have a responsibility, in so far as reasonably practicable, to design workplaces that are healthy and safe for persons to work in and they do not expose those persons unduly to hazards or risks in the workplace.

There are no such specific designer duties in New South Wales, Australian Capital Territory, Northern Territory and the Commonwealth.

The ACEA believes that as professional service providers, engineers do reasonably owe a duty of care in their provision of their design work at Common Law in any event.

Currently, consulting engineering firms, especially those that operate in multiple jurisdictions are burdened by the inconsistent OHS legislative environment. This increases bureaucratic procedures, wastes company time and resources and ultimately reduces business capability all to the detrimental effect of business development.

For that reason, the ACEA supports specific designer duties of care in the model OHS Act which requires a designer of structures to owe a duty of care to minimise or reduce hazards and risks in the workplace, so far as is reasonably practicable, which involves exercising the standard of skill and care expected by a professional designer practicing in the relevant field of engineering.

ACEA recommendation:

A designer's specific duties should be recognised in the model OHS Act. This must be accompanied by the qualifier of what is reasonably practical, meaning that their duties of care should be proportionate to their level of control, competence, qualification and within the standard of what is reasonably practicable.

¹ National Review Panel, Oct 2008, First Report to the Workplace Relations Ministers' Council, pg: 70

² National Review Panel, Oct 2008, First Report to the Workplace Relations Ministers' Council, pg: 72

1.4 Design influenced by key construction participants

The ability of designers to achieve their specific designer duties of care is dependent upon the information provided and influences exerted by a number of key construction project participants, especially clients and principal contractors.

In Australia most forms of project delivery in the building and construction industry mean consulting engineering firms are at 'arms length' from the client or end user of a project.

For example, where projects are delivered by design and construct contracting (D&C) the contractor is imposed between the client and design consultant. It is the contractor who holds the relationship with the client. The consultant has a contractual relationship with the contractor only for the provision of consultancy services (typically engineering design). The contractor may not provide the consultant with information regarding who the client is and who the end users of the building/structure will be. Short design timeframes can allow minimal investigation by the design engineer and typically the consultant is unable to access this information unless it is known and provided by the contractor.

If a collaborative and performance-based approach is to be developed in a model OHS Act, then there is a need to break down the fragmented and inconsistent working arrangements that these contractual relationships have built up. For example, there is little or no opportunity for the designer in a D&C contract to collaborate or consult with the project owner or client given that they are working under contract with the contractor. In D&C contracting a designer has little or no control over how the client or the contractor will undertake construction of the design and the designer has to rely on the principal contractor to see that any work carried as part of the construction phase is done in accordance with the design, safely and without exposing stakeholders to health and safety risks.

The ACEA believes that there is currently a failure to balance specific duties of care in the construction and design of a project in most jurisdictions. The ACEA believes that most jurisdictions at present focus only on the designer's specific duties while making little or no reference to other parties, with exception to the QLD Workplace Health and safety Act 1995 (QLD WHS Act 1995) which places legislative responsibilities on the Client (s30A), Project Manager (s30C) and Principal Contractor (s31)³.

The ACEA suggests that the lack of specific duties of care placed upon key construction participants reduces competence, cooperation and coordination in the management and delivery of projects. This failure to balance duties of care means that designers have disproportionate obligations to their level of control or influence compared to other key construction project participants.

The ACEA considers that the specific duties of care placed upon clients, project managers and principal contractors in the QLD WHS Act 1995 acknowledges that these key stakeholders have a significant level of control over construction and design management. The QLD duties aim to recognise clients, project managers and principal contractors influence over the other project participants (i.e. designers) to make sure things are planned, coordinated and supervised for the benefit of improving health and safety outcomes. This promotes a balanced, collaborative and team approach in eliminating and reducing risks to health and safety in construction projects while also encouraging better integration and changes in duty holder's attitudes and behaviour.

However, while its proposed in the Review Panel's first report that a primary duty of care will be imposed on clients,

i.e. if the client does so as part of the conduct of their business or undertaking commissions a design and construction project they must ensure, so far as is reasonably practicable, the provision of such information, training, instruction and supervision as necessary to protect all persons from risks to their safety and health from the conduct of their business or undertaking,

³ Division 2 – Obligations of Particular Persons, Queensland Workplace Health and Safety Act 1995

the ACEA believes that the primary duty of care fails to clarify the overall management and coordination of health and safety in a project, and this in addition makes it harder for those involved in construction projects to comply with their duties.

ACEA recommendation:

The model OHS Act should impose specific duties of care on key construction project participants, such as clients, project managers and principal contractors as they have a significant influence over health and safety in the construction and design of projects. This will promote in the model OHS Act the principle of a collaborative and "team approach" in minimizing and reducing risks to health and safety in the lifecycle of projects (see diagram 1-pg 13 for more details).

1.5 Cooperation and coordination in the construction and design of structures

The ACEA suggests that as most current OHS legislation in Australia does not promote or fully provide for a "team approach" with regard to ensuring health and safety in the development of building and construction projects, that health and safety is compromised as a consequence.

The ACEA recommends that one of the main purposes of the model OHS Act should be to minimise and reduce accidents and fatalities in the construction of building and structures. However the ACEA believes that while the Review Panel's first report proposals will impose obligations on all duty holders involved construction projects, it fails to advance and strengthen the need for better cooperation, coordination and integration between the parties involved. It should be noted that on complex building projects that have multiple parties involved some hold principle duties and some specific duties. This makes the sharing of information and cooperation paramount in ensuring that the parties are clear about their contribution and role in minimising OHS risks.

The ACEA believes that health and safety outcomes could be improved if key construction project participants, including clients, have specific duties of care in the Model OHS Act. This should be further underpinned within subordinate legislation, setting a specific requirement for OHS coordinators role on complex building and construction projects. A precedent for this exists in the United Kingdom's (UK) Construction Design and Management Regulations 2007 (CDM Regs 2007).

In the UK CDM Regs 2007 a client must:

- Ensure only competent designers, contractors and other team members are appointed for the construction work.
- Ensure they give adequate time and resources to complete the project and this may involve consultation with designers and contractors.
- Must provide designers and contractors with project-specific health and safety information needed to identify hazards.
- Are to appoint a coordinator to assist with the health and safety planning and arrangements. The Coordinator is to be appointed at after the initial design phase so they can influence the detailed design and other planning.

The Regulations also promote that:

- The specific designer duties of care are appropriate and proportionate for designers of structures and within their professional, commercial and operational capabilities; and
- They are supported by industry associations and design professionals as a whole due to their suitable and balanced obligations which reflect a designers ability to eliminate and reduce hazards and risks for persons using it as a workplace.

The UK CDM Regulations 2007 were introduced as a result of the need to increase the requirements on a number of construction project participants to better consult, combine forces and manage construction and design projects that improves health and safety. The same need exists for Australian construction projects.

ACEA recommendations:

- The model OHS Act should provide for separate duties of care on the following classes of persons:
 - a) designers of plant, structures or substances;
 - b) manufactures of plant, structures or substances;
 - c) construction project participants including clients, project managers, principal contractors and**
 - d) importers or suppliers of plant, structures or substances.

The model OHS Act should be supported by Construction Design Management Regulations that should provide for the appointment of an OHS coordinator by the client on complex building and construction projects, based on the Regulations introduced in 2007 by the UK.

WHAT SHOULD THE DUTY OF CARE ENSURE?

1.6 National Review Panel recommendation 31

The duty of care would be to ensure that health and safety of those contributing to the use of, using, otherwise dealing with or affected by the use of plant, structures or substances is not put at risk from the particular activity of:

- a) construction;
- b) erection;
- c) installation;
- d) building;
- e) commissioning;
- f) inspection;
- g) storage;
- h) transport;
- i) operating;
- j) assembling;
- k) cleaning;
- l) maintenance or repair;
- m) decommissioning;
- n) disposal;
- o) dismantling; or
- p) recycling⁴.

1.7 National Review Panel recommendation 32

The duties of care should apply in relation to any reasonably foreseeable activity undertaken for the purpose for which the plant, structure or substance was intended to be used (e.g. construction, installation, use maintenance or repair)⁵.

1.8 Application to designers of structures

The ACEA believes that designers should not owe a duty to those who construct the design. This is due to the structure that they are designing is not the same as the 'workplace' in which the

⁴ National Review Panel, Oct 2008, First Report to the Workplace Relations Ministers' Council, pg: 72

⁵ National Review Panel, Oct 2008, First Report to the Workplace Relations Ministers' Council, pg: 74

construction workers are working. The 'construction site' is not designed by the engineer. It is designed by the builder or principle contractor.

That is, the building contractor lays out the site; designs drop zones, site sheds, materials handling, site access etc and continues to design these as the construction process takes place and the site changes.

It will be counter-productive to determine that the designer of the structure (who is and should be focussed on the safe use of the item once it is complete) has the responsibility for design of the 'construction site'.

The ACEA is also opposed to the requirement that designers must be responsible for the OHS of a building/structure throughout its lifecycle. This is because the designers control and ability to foresee hazards sharply diminishes once the design is constructed (see diagram 2-pg 14 for more details). Once the building/structure is in the hands of the owner the original designer will not be party to any decisions taken by the owner regarding its operation, maintenance, remodelling, decommissioning, dismantling and disposal. This requirement is a counter-intuitive approach to health and safety. It will not improve health and safety in a project as it will reduce the requirement for owners of buildings/structures to adequately assess and maintain the building/structure if they believe that the original designer retains liability.

The ACEA advises that designers of structures can consider some aspects of a projects lifecycle but this will always be dependant on;

- the information they receive from key construction project participants (i.e. clients & contractors);
- whether a collaborative approach to construction and design management is encouraged and promoted within the contractual framework (balanced specific duties placed on designers, clients, project managers and principal contractors);
- a level of control that is commensurate to a designer's capacity to direct or influence health and safety (see diagram 2-pg 14 for more details);
- a designers qualifications and professional capabilities (please see section 1.11);
- the qualifier for a duty of care of so far as the risk is reasonably foreseeable and reasonably practicable steps can be taken to address the risk; and
- the extent to which the building/structure is being used for the purpose for which it was originally designed.

The most contentious part to recommendation 31 is the requirement to ensure health and safety to persons involved in all phases of a project beyond construction.

It is understood that the requirement will have the qualifier that the designer has specific duties regarding the ongoing lifecycle of the building/structure as far as is "reasonably practicable", however the ACEA is concerned that this will not stop designers from being joined to OHS claims in court, well beyond the end of their involvement in such projects.

In addition there is no suggestion in the Review Panel's first report that any statute of limitation will apply. The ACEA is opposed to the original designer's liability extending beyond the statute of limitation, given that the life span of a building/structure can extend hundreds of years.

It is noted that the Review Panel's recommendation includes the qualifier that the duty should only extend in so far as the building/structure is that the workplace is being used for the purpose for which it was originally designed, this qualifier is supported by the ACEA.

ACEA recommendation:

A designer's specific duty of care regarding a building or structure should not extend beyond completion of the construction and should be limited by a statute of limitations. The duty should also only extend insofar as the building/structure is being used for the purpose for which it was originally designed.

TO WHOM SHOULD THE DUTY OF CARE BE OWED?**1.9 National Review Panel Recommendation 33**

The duties of care of are owed to those persons using or otherwise dealing with (e.g. constructing, maintaining, transporting, storing, repairing), or whose health and safety may be affected by, the use of the plant, substance or structure⁶.

1.10 Application on designers

The ACEA advises that a designer's qualifications only deal with the principles of engineering design, not construction or other operating processes. A designer has no formal training in construction processes and therefore it's unrealistic to assume that designers can ensure health and safety of persons involved in the process of construction, maintenance, repair or demolition of a project.

For example, the education of a structural engineer is usually achieved by undertaking a structural engineering degree obtained at a university or relevant institution. The primary structural engineering subjects learnt involve strength of materials or solid mechanics, statics, dynamics, material science, numerical analysis and conceptual structural design. In the later stages of an structural engineers degree they might study reinforced concrete, composite structure, timber, masonry and structural steel designs. Throughout a structural engineers education they are continually developing expertise and skill in structural mechanics, structural dynamics and structural failure analyses. This helps build an underlying set of qualified analytical skills and theories for structural engineering students.

Either in the final years of a structural engineering degree or in a master's, a student might be taught advanced structural engineering specializations, such as pre-stressed concrete design, space frame design for buildings and bridge engineering. In similar fashion the education of a civil engineer generally involves core elements such as physics, mathematics, project management, design and specific topics in civil engineering.

The ACEA accepts that in some instances a designer's qualifications at some institutions might include a core element in engineering design and construction. However, this area of study is not a generic national educational approach to an engineering degree and therefore it's an objective decision made by an educational institution to teach engineering and construction processes.

It is not supported that a designer owes a duty of care to persons regarding the construction, maintenance or disposal of a design because designers are not qualified to provide such advice. If a designer were to provide such advice they would in fact be acting negligently.

1.11 New engineering education and qualifications

The ACEA suggests that if the model OHS Act is to include additional specific duties of care for designers to ensure, so far as is reasonably practicable, health and safety for persons involved in later phases of a design project, it would require a new national educational program to educate and qualify students in engineering and construction, maintenance and disposal processes, and courses to up skill existing designers.

⁶ National Review Panel, Oct 2008, First Report to the Workplace Relations Ministers' Council, pg: 74

The ACEA advises that this would involve a substantial commitment from institutions to integrate relevant OHS models, concepts and case studies into their course units so as to fully qualify engineers in construction processes. Importantly, there is also a skills gap in experienced academic staff in educational institutions to teach OHS and construction processes in an engineering degree.

The ACEA envisages that to introduce new core OHS elements to an engineering degree would have to be phased in over a period of time to allow for academic professional development in specific OHS construction processes. The design of course subjects would also have to be factored to allow for educational institutions to develop appropriate qualifications for designers of structures to be skilled in. This would not provide a solution for professional engineers currently providing design services in the building and construction industry.

ACEA recommendation:

- *The duties of care of are owed to those persons whose health and safety may be affected by the use of the structure for which it was designed, but there be no duty of care for the designer to provide advice regarding construction/maintenance/repair/demolition techniques.*

WHAT SHOULD THE DUTIES OF CARE REQUIRE?

1.12 National Review Panel Recommendation 34

The specific duties of care should incorporate broad requirements for:

- hazard identification, risk assessment and risk control;*
- appropriate testing and examination to identify and hazards and risks;*
- the provision of information to the persons to who the plant, structure or substance is provided about the hazards, risks and risk control measures; and*
- the ongoing provision of any additional information as it becomes available⁷.*

1.13 Application to designers

Like many business enterprises, design inherently involves risk and requires those risks to be identified, evaluated and managed. Risk management systems can be complicated or simple, depending on the individual needs of the project. However, some form of risk management system is an essential part of the project planning process.

Identifying and quantifying these risks is the first step in a process of prevention and developing strategies to minimise the possibility of an action or incident occurring. Risk management is also directed towards ensuring that if an action or incident does occur, the outcome has minimal impact on the commercial viability and performance of the project.

1.14 Risk management

The ACEA is in support of recommendation 34A that a designer's specific duty of care should require a risk management process to be undertaken. However, the ACEA believes that the elements of a risk management process do not need to be specified within each of the duties of care in the model OHS Act.

However, the ACEA does have concerns to recommendation 34D because of the broad requirement that provides for the ongoing provision of any additional information as it becomes available. This proposed requirement would be a significant burden on designers of structures, especially if other construction project participants fail to have broad requirements incorporated in their duties of care.

^{7 7} National Review Panel, Oct 2008, First Report to the Workplace Relations Ministers' Council, pg: 75

The ongoing provision of information as it becomes available should be a requirement for all construction and design project participants as well as end-users, with the requirement to provide information based in so far as is reasonably practicable. This is because it is not just the designer who will be privy to new information on the design as all stakeholders contributing to the project will be exposed to new technologies, research and evidence that may affect the structure and those persons working in it. Furthermore the designer will not be privy to changes that users make to the building/structure, which may fundamentally change the type of information that is relevant.

There is no proposed time limit on this obligation and it is unreasonable to expect businesses to hold significant records regarding their design projects for the lifetime of a building, which may extend over a number of centuries. To expect designers to recall the details of the design in each and every case is onerous in the extreme.

ACEA recommendation:

The specific duties of care, should incorporate broad requirements for:

- a) hazard identification, risk assessment and risk control;*
- b) appropriate testing and examination to identify and hazards and risks;*
- c) the provision of information to the persons to who the plant, structure or substance is provided about the hazards, risks and risk control measures; and*
- d) the ongoing provision of any additional information as it becomes available to all duty holders, so far as is reasonably practicable and subject to an appropriate time limitation.*

DIAGRAM 1

This diagram shows how a collaborative approach by key construction project participants with specific balanced duties of care can better collaborate, coordinate and integrate health and safety in the construction and design of projects.

A TEAM APPROACH TO CONSTRUCTION AND DESIGN PROJECTS

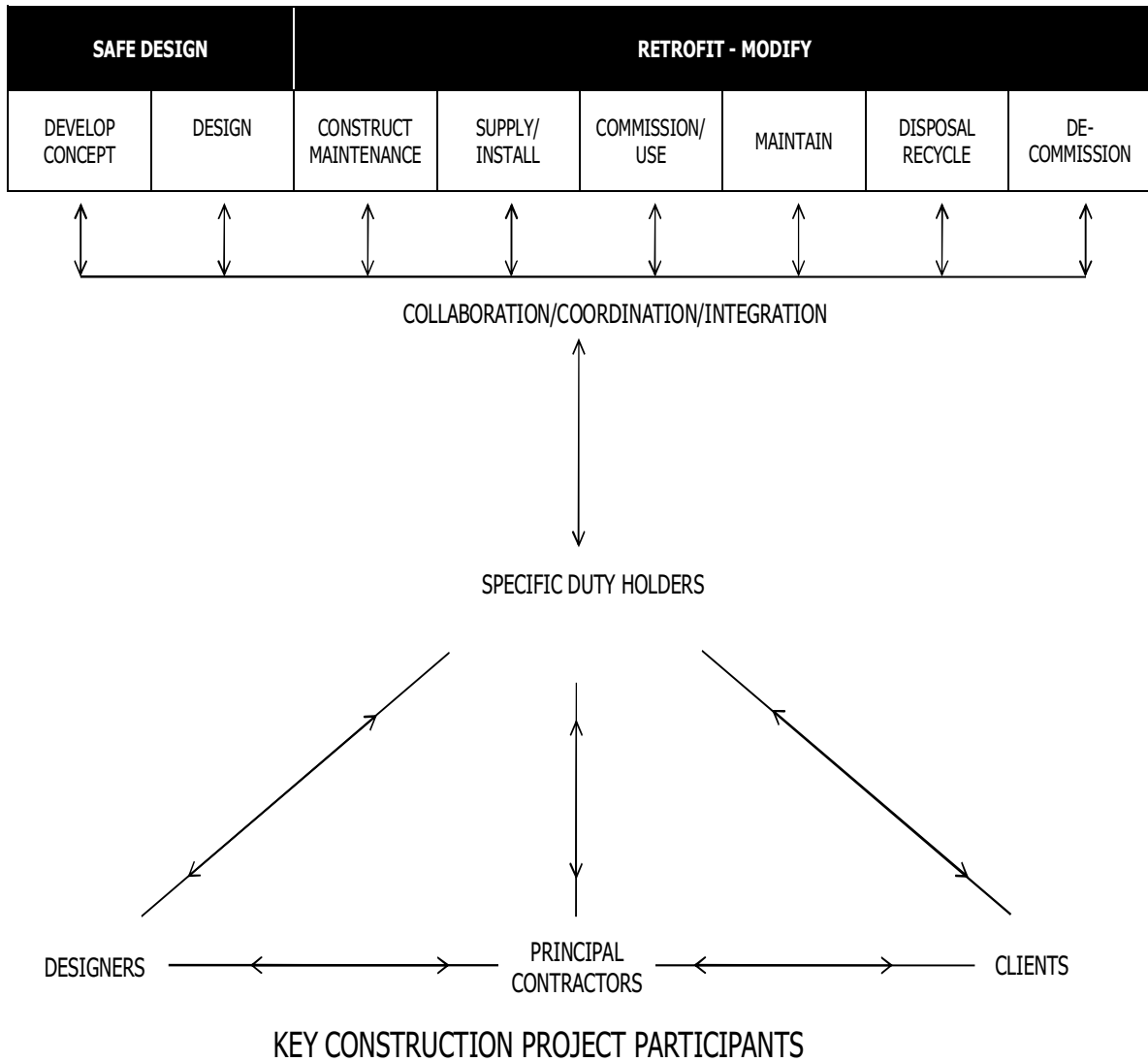
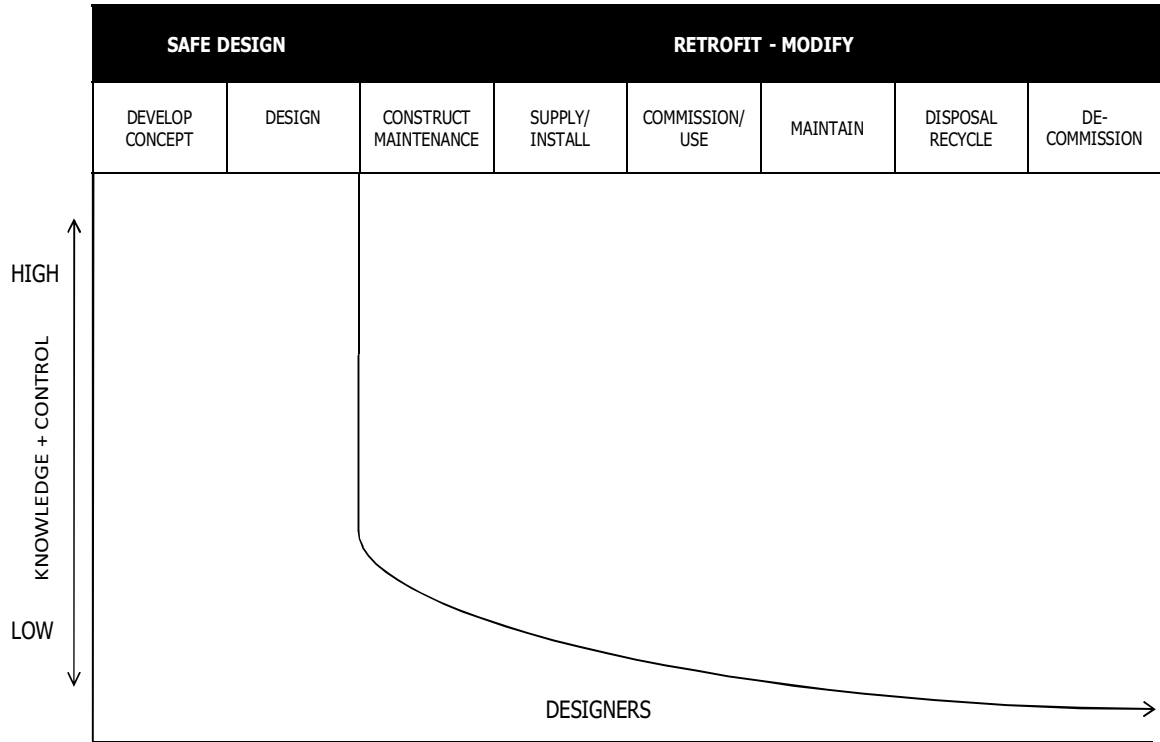


DIAGRAM 2

This diagram shows how a designers ability to ensure health and safety, so far as is reasonably practicable, of persons involved in the various stages of a construction and design project is at its highest in the conceptual and design phase of a project. The ability to ensure health and safety is reduced once the construction and later phases of a project are undertaken.



ABILITY TO ENSURE HEALTH AND SAFETY OF PERSONS INVOLVED IN VARIOUS PHASES OF A CONSTRUCTION/DESIGN PROJECT