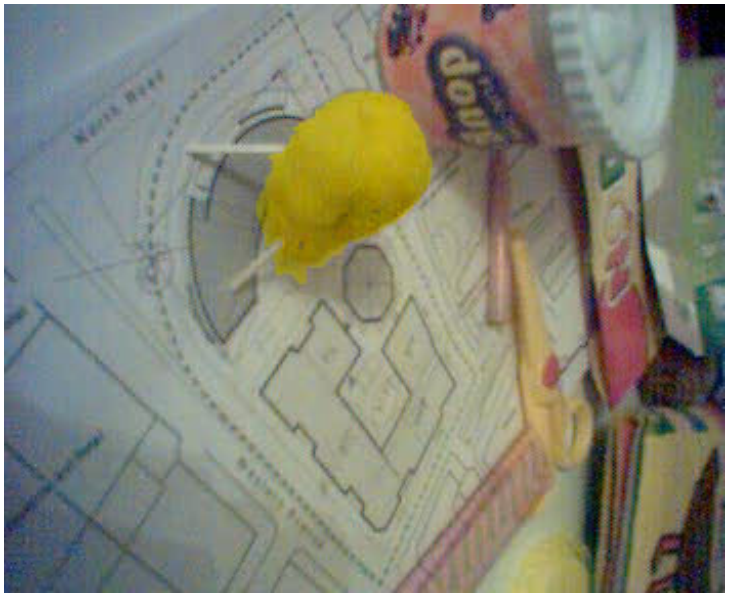

management paper

P.G.Dip in Architectural Practice

Rob Annable

-----Original Message-----
From: Will Alsoft [mailto:will@alsoft.com]
Sent: 06 May 2004 18:46
To: Rob Annable
Cc: Zaha Hadon't; Nasty B'stard
Subject: Re: Here's the Beach!

Hi Guys!

Here's the current drawings for my latest proj. Can you believe I managed to get planning approval with this baby?!

Anyway, I'm looking forward to having you Brummies working ~~for me~~ with us on this one. If you need any more info, just holler and I'll whip up a few more sand castle models. Did you know sand piles are always in a state of dynamic equilibrium? It means they're always on the verge of collapsing…

Ciao,

Will – *from the playa, Costa del Sol*

Rob Annable

Question 1

The apparent reluctance of the senior partners to accept the commission has led to discontent within the office.

There have been thinly-disguised accusations of 'lack of ambition' and 'lack of professionalism'. Concern has spread quickly to encompass 'inadequate staff development' and 'lack of quality control'.

A formal meeting has been arranged to address these matters and to consider the way forward. Set out the main issues for discussion, their implications and possible options for action, in the form of a paper to be distributed prior to the meeting.

Key scenario info + statements:

Practice name:	***guitarchitecture***
Location:	Birmingham, West Midlands
Staff:	2 senior partners + 3 junior partners
	2 associates + 1 architect (Rob Annable)
	11 technical staff [1] + 3 admin staff
Project:	'Playa Doh' urban hamlet mixed use scheme
	Will Alsoft Architects – renowned architectural agent provocateur, reputation for being difficult to work with. Extent of drawn information available minimal (see cover), design concept extravagant.
Client:	Mr. Nasty B'stard [2], 'Screw Yew' Developers.

"The two senior members of the practice are reluctant to accept the commission from a developer whose reputation is one of being problematic."

vs.

"The junior partners and associates consider the possibility of working on this prestigious project…as an ideal opportunity to re-launch the practice."

[1] of varying experience – 4:4:2

see team members diagram in appendix 1

[2] this guy actually exists, I've met him – he had his name changed by deed poll

internal memo :page 1 of 2

F.A.O -all staff members and partners
DATE - 01/11/03
RE. - scheduled staff meeting to discuss office strategy

The following issues have been culled from all staff and partners and are put forward as an agenda for discussion on Fridays meeting. The items relate both to the offer of work from Nasty B'stard and also some wider issues in the office which need to be recognised and acted upon.

The staff understand that the Senior Partners are proposing to turn down the new project. All were agreed that this seemed an ideal opportunity and were both surprised and disappointed to hear of the Partner's plans. Having discussed the reasons given (and rumours heard) so far, the following ideas have been tabled:

- a developer whose reputation is one of being problematic…

a) Could this be clarified?
b) Do the partners have direct experience or is this merely word of mouth?
c) Perhaps credit checks could be completed?
d) If financial security is an issue, perhaps a form of agreement could be drawn up that ensures a strict regime of monthly payments and/or an agreed limit to abortive costs.
e) Could the staff members interested in the project alleviate the pressure on the partners by instigating some form of risk share? (however, this will inevitably lead to discussions of profit share)
f) if the Partners are concerened about the effect on the company PI – could we examine the object of specific project insurance?

- inadequate staff development…

a) do the Partners feel that we are unable to accommodate the ARB Code of Conduct regarding adequate service?[3]
b) if there is a real need to improve the skill base in the workforce, the commencement of a new project could surely provide the opportunity of engaging with a fresh schedule of CPD seminars. The introduction of new materials and detailing techniques that will inevitably come about from the innovative project will provide a stimulus for new areas of learning. A list of the CPD options can be accessed and organised through http://www.cpduk.co.uk.

- lack of ambition…

a) some staff members feel that there is a need for greater transparency regarding the company's business plan. Do we have one? Perhaps it is time to contruct a new plan involving input from all the staff members.

[3] ARB code of conduct Standard 1

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internal memo :page 2 of 2
F.A.O -all staff members and partners
DATE - 01/11/03
RE. - scheduled staff meeting to discuss office strategy

b) generally, the concerns regarding lack of ambition may be simply solved by improving the communication between the Partners/Staff.
c) the Partner's have also proposed possible incentivisation schemes for staff members

- lack of quality control…

a) there is agreement from both Partners and staff that the firm should embark on programs that will provide accreditation in quality control systems such as BSE 9001:2000 and 'Investors in People'[4].
b) it should be recognised that these are both long term programs and their success will probably require the creation of a new position – Practice Manager. It has so far been agreed that this is role that could perhaps be taken on by one of the Junior Partners or Associates.

[4] see appendix 1

- lack of professionalism…

The partners have asked that anybody who has concerns about professionalism approach them to arrange a separate meeting to discuss this issue. The seriousness of this accusation should not be overlooked as there is a duty under the ARB Code of Conduct to prevent any such activities.

A.O.B:

We need to agree a date for the proposed Paintball weekend. The winning side of the Staff vs. Partners match will take home a grand prize…

Prepared by Rob Annable
(if there are any more issues you wish to add before the meeting, please let me know)

Question 2

Your partner has requested you to prepare a fee proposal for the new development. Part of the scheme (signature building) has been designed up to RIBA Stage D and received planning; the remainder of the scheme will require a full design service.

Demonstrate how you will accommodate this in your fee proposal.

To support your fee, prepare a paper for internal circulation only, outlining the following aspects, to assist in the forward management of the office.

- *Understanding of the proposed scope of work*
- *Resource requirement*
- *Programming information*

During the course of your fee preparation, it is important that you identify any risks, exclusions and contingencies. Give examples of these and explain how you may choose to accommodate them. Bear in mind that you have agreed with the Partners it is vital that your fee bid is successful for the ongoing well being of the Practice.

Assumptions:

Client's budget	£13.5m ex VAT
Construction Cost	£13.5m - 15% = £11,475,000 [1]
Contract Duration/type	18 months - JCT 98 [5]
Cost breakdown:	

Conversion of existing Victorian Courtyard

3 storey re-furbished warehouse – 5385 m²

75% Open Market @ £820 per m² = £3,311,775 [7]

25% Social Housing @ £870 per m² = £1,171,238

= **£4,483,013**

Commercial/Retail building

4 storey city centre shopping centre – 6000m²

@ £1165 per m² = **£6,991,987?**

Total = **£11,475,000**

- It is assumed that there is no construction work required on the mosque since the scenario describes it as already converted.
- Digital survey information is complete and available.
- The fees for the signature architect are to be invoiced separately direct to the client on a time-charged basis.

[5] client's budget less 15% contingency

[6] see question 5

[7] more onerous requirements of Social Housing specification results in different build costs – prices taken from experience in practice and discussions with 'Dearle and Henderson' quantity surveyors

RIBA fee scale:

For a project of this size, the RIBA guidance on fees[8] describes the classification of the two parts of this project as follows:

Commercial - Department Stores – Class 4

Residential – Apartment blocks – Class 4

'Indicative Percentage Fee Scales – Normal Services'

Retail building
New Works:
Class 4 – percentage fee = 6.5%

Adjustment to allow for already completed stages[9]:
Stages E to L = 60% of fee
6.5 x 60% = **3.9%**

3.9% of £6,991,987 = **£ 272,676**

Victorian building
Works to existing building:
Class 4 – percentage fee = 9.75%

No adjustment required – full service

9.75% of £4,483,013 = **£437,094**

Total fee = £272,676 + £437,094 = **£709,770**

Total percentage:

£709,770 x 100 = **6.2%**
£11,475,000

This must now be tested against the actual time required to complete the project.

[8] source: 'A Client's Guide to Engaging an Architect' – April 2000

[9] stages A-D already completed by signature architect

Hourly rates:

To test the fee scale suggested by the RIBA documents, it is necessary to take the hourly rates of the team members and then use a project plan to calculate the expense that will be incurred during the project.

First we will calculate the hourly rates of each tem member.

Hours worked per annum

		Days		
Holidays	Christmas	3		
	Easter	2		
	May	2		
	Spring	1		
	Summer	2		
	Total	10	10	
	Annual		20	
			30	
	Sickness		5	
Weekends			104	
			139	
Days worked				226
Hours worked @ 8 [10] hrs /day				**1808**

Allow 22.5% lost for Admin/Marketing etc. [11]

Net hours worked: **1356**

Hourly rate calculation

(see budget income and expenditure calculations Appendix 2)

Gross turnover: £1050500
Salaries: £638770
Net overheads (incl. secretarial costs):£390945

Overhead rate / productive staff member

390945 /19 staff members = **£15.17** per hour
1356 hrs

This represents the minimum required to break even before wages.

[10] 8 hours used in this example to simplify calculation - 7.5 hours more commonly used

[11] optimistic prediction based on improved office management - see question 1

Finally, to calculate the hourly rate for each staff member, this must be added to the rate relevant to each persons required wage.[12]

[12] salaries proposed taken from Hays Montrose 2003 survey - see appendix 2

Tech Staff							r'nd up/dwn:
Norman Fostered	Jun.Part.	39,000	+	15.17	=	£44	**£45**
		1,356					
Richard Rogered	Jun.Part.	37,500	+	15.17	=	£43	**£45**
		1,356					
Nicholas Rickshaw	Jun.Part.	38,000	+	15.17	=	£43	**£45**
		1,356					
Amanda Lafeet	Assoc.	29,000	+	15.17	=	£37	**£40**
		1,356					
Piers Cough	Assoc.	28,000	+	15.17	=	£36	**£35**
		1,356					
Rob Annable		23,000	+	15.17	=	£32	**£30**
		1,356					
David James		20,000	+	15.17	=	£30	**£30**
		1,356					
Sol Campbell	Assist.	18,000	+	15.17	=	£28	**£30**
		1,356					
Ashley Cole	Assist.	17,500	+	15.17	=	£28	**£30**
		1,356					
Gary Neville	Assist.	19,000	+	15.17	=	£29	**£30**
		1,356					
Phil Neville	Assist.	19,000	+	15.17	=	£29	**£30**
		1,356					
David Beckham		30,000	+	15.17	=	£37	**£35**
		1,356					
Kieron Dyer		20,000	+	15.17	=	£30	**£30**
		1,356					
Nicky Butt		21,000	+	15.17	=	£31	**£30**
		1,356					
Paul Scholes		20,000	+	15.17	=	£30	**£30**
		1,356					

hourly rates cont'd:

Emile Heskey		24,000	+	15.17	=	£33	**£35**
		1,356					
Michael Owen		27,000	+	15.17	=	£35	**£35**
		1,356					
Partners							
Bernard SueMe		45,000	+	15.17	=	£48	**£50**
		1,356					
Zaha Hadon't		45,000	+	15.17	=	£48	**£50**
		1,356					

To complete the calculation of fees based on time required, I must estimate the number of man hours each stage requires and which of the team members will be involved.

The practice recognises that this is an important project to assist in the re-launch of the firm. Sufficient staffing to ensure the project runs smoothly and is delivered on time is important. Therefore, I propose the following team:

Senior Partner:	Zaha Hadon't
Junior Partner:	Norman Fostered
Associate:	**Amanda Lafeet**
Architect:	**Rob Annable**
Tech staff:	**David Beckham**
	Emile Heskey
	Ashley Cole

The core team of 4 consisting of Amanda, Rob, David and Emile; with occasional input from the Partners and a further technician when required.

Calculating the Fee bid:

Having arrived at the rates to be charged for the time spent on the project. I must now predict the number of man days/hours that the office will need to invest.

Victorian Courtyard Building – full service:

Work Stages A – C

- Concept / Development = 10 man days
- Liaise with client / Consultants = 20 man days
- Administration = 15 man days
- Prepare Brief = 15 man days
- Drawings = 215 man days

Total = 275 man days
x 8 hours = **2200 man hrs**

Staffing estimates:

Senior Partner:	Zaha Hadon't: 5% x 2200 x £50 per hour	= £5500
Junior Partner:	Norman Fostered: 10% x 2200 x £45 per hour	= £9900
Associate:	Amanda Lafeet: 25% x 2200 x £40 per hour	= £22000
Architect:	Rob Annable: 35% x 2200 x £30 per hour	= £23100
Tech staff:	David Beckham: 5% x 2200 x £35 per hour	= £3850
	Emile Heskey = 20% x 2200 x £35 per hour	= £15400
	Ashley Cole = ------	

Fee required for stages A-C = £79,750

Work Stages D - E

- Liaise with Client/Consultants/Bldg Ctrl = 50 man days
- Administration = 41 man days
- Drawings = 370 man days

Total = 481 man days
x 8 hours = **3850 man hrs**

Staffing estimates:

Senior Partner:	Zaha Hadon't: 5% x 3850 x £50 per hour	= £9625
Junior Partner:	Norman Fostered: 5% x 3850 x £45 per hour	= £8663
Associate:	Amanda Lafeet: 10% x 3850 x £40 per hour	= £15400
Architect:	Rob Annable: 30% x 3850 x £30 per hour	= £34650
Tech staff:	David Beckham: 10% x 3850 x £35 per hour	= £13475
	Emile Heskey = 20% x 3850 x £35 per hour	= £26950
	Ashley Cole = 20% x 3850 x £30 per hour	= £23100

Fee required for stages D-E = £132,171

Work Stages F – G

- Liaise with Clients/Consultants/Bldg Ctl = 20 man days
- Administration = 20 man days
- Drawings = 260 man days

Total = 300 man days
x 8 hours = **2400 man hrs**

Staffing estimates:

Senior Partner:	Zaha Hadon't: ------	
Junior Partner:	Norman Fostered: 5% x 2400 x £45 per hour	= £5400
Associate:	Amanda Lafeet: 5% x 2400 x £40 per hour	= £4800
Architect:	Rob Annable: 20% x 2400 x £30 per hour	= £14400
Tech staff:	David Beckham: 20% x 2400 x £35 per hour	= £16800
	Emile Heskey = 25% x 2400 x £35 per hour	= £21000
	Ashley Cole = 25% x 2400 x £30 per hour	= £18000

Fee required for stages F-G = £ 80,400

Work Stages H – L

- Tender action = 7 man days
- Pre-contract meeting = 1 man day
- Site meetings (1 per month) = 18 man days
- Consultants meetings (2 per month) = 36 man days
- Inspection / Quality Control (0.5 days per week) = 36 man days
- Contract administration = 72 man days
- Additional information (2 days per week) = 145 man days

Total = 315 man days
X 8 hours = **2520 man hrs**

Staffing estimates:

Senior Partner:	Zaha Hadon't: ------	
Junior Partner:	Norman Fostered: 5% x 2520 x £45 per hour	= £5670
Associate:	Amanda Lafeet: 15% x 2520 x £40 per hour	= £15120
Architect:	Rob Annable: 50% x 2520 x £30 per hour	= £37800
Tech staff:	David Beckham: 20% x 2520 x £35 per hour	= £17640
	Emile Heskey = 10% x 2520 x £35 per hour	= £8820
	Ashley Cole = -----	

Fee required for stages H-L = £ 85,050

The total cost across all the stages of the Victorian building is:

Stage A-C = £79,750
Stage D-E = £132,171
Stage F-G = £80,400
Stage H-L = £85,050

Total = £377,371

Including 10% safety margin for unforeseen/abortive work:

Total =£415,108

Retail Building – E to L only:

Work Stage E

- Liaise with Client/Consultants/Bldg Ctrl = 20 man days
- Administration = 20 man days
- Drawings = 180 man days

Total =220 man days
X 8 hours =**1760 man hrs**

Staffing estimates:

Senior Partner:	Zaha Hadon't: 10% x 1760 x £50 per hour	= £8800
Junior Partner:	Norman Fostered: 10% x 1760 x £45 per hour	= £ 7920
Associate:	Amanda Lafeet: 30% x 1760 x £40 per hour	= £ 21120
Architect:	Rob Annable: 15% x 1760 x £30 per hour	= £ 7920
Tech staff:	David Beckham: 20% x 1760 x £35 per hour	= £ 12320
	Emile Heskey = 15% x 1760 x £35 per hour	= £ 9240
	Ashley Cole = ----	

Fee required for stage E = £ 67,320

Work Stages F – G

- Liaise with Clients/Consultants/Bldg Ctrl = 30 man days
- Administration = 15 man days
- Drawings = 275 man days

Total = 320 man days
X 8 hours =**2560 man hrs**

Staffing estimates:

Senior Partner:	Zaha Hadon't: 5% x 2560 x £50 per hour	= £6400
Junior Partner:	Norman Fostered: 5% x 2560 x £45 per hour	= £5760
Associate:	Amanda Lafeet: 20% x 2560 x £40 per hour	= £20480
Architect:	Rob Annable: 10% x 2560 x £30 per hour	= £7680
Tech staff:	David Beckham: 30% x 2560 x £35 per hour	= £26880
	Emile Heskey = 20% x 2560 x £35 per hour	= £17920
	Ashley Cole = 10% x 2560 x £30 per hour	= £7680

Fee required for stages F-G = £92,800

<u>Work Stages H – L</u>

- Tender action = 0 man days[13]
- Pre-contract meeting = 0 man day
- Site meetings (1 per month) = 0 man days
- Consultants meetings (2 per month) = 0 man days
- Inspection / Quality Control (0.5 days per week) = 36 man days
- Contract administration = 72 man days
- Additional information (2 days per week) = 145 man days

Total = 253 man days
X 8 hours = **2024 man hrs**

[13] site meetings and tender actions already accounted for in Victorian building calculation

Staffing estimates:

Senior Partner:	Zaha Hadon't: ------	
Junior Partner:	Norman Fostered: 5% x 2024 x £45 per hour	= £ 4554
Associate:	Amanda Lafeet: 35% x 2024 x £40 per hour	= £ 28336
Architect:	Rob Annable: 25% x 2024 x £30 per hour	= £ 15180
Tech staff:	David Beckham: 25% x 2024 x £35 per hour	= £ 17710
	Emile Heskey = 10% x 2024 x £35 per hour	= £ 7084
	Ashley Cole = -----	

Fee required for stages H-L = £ 72,864

The total cost across all the stages of the retail building is:
Stage E = £67,320
Stage F-G = £92,800
Stage H-L = £72,864

<u>Total = £232,984</u>

Including 10% safety margin for unforeseen/abortive work:

<u>Total =£256,282</u>

The Fee bid:

The total fee required for both parts of the project (including the 10% safety factor):

Victorian building = £415,108
Retail building = £256,282

Total = £671,390

With a contract sum of £11,475,000, this represents **5.85%**

As a comparison to the RIBA fee scale (6.2%), this is a discount of 0.35% or £38,380

The inclusion of the 10% safety factor will become the negotiating tool for the bid.

internal memo: page 1 of 2
F.A.O -all partners
DATE - 02/11/03
RE. - proposed fee bid for Playa Doh project

Having completed an assessment of both the hours required[14] and a comparison with the RIBA recommended fee scale. The fee proposed for this project is:

[14] see project plan used for question 4

Total = £671,390

With a contract sum of £11,475000, this represents 5.85%

As a comparison to the RIBA fee scale (6.2%), this is a discount of 0.35% or £38,380

In order to remain competitive a negotiating range is proposed on the basis of the contingency hours built into the calculation.

Victorian building	=£415,108
Less 10% safety factor	=£377,371
Retail building	=£256,282
Less 10% safety factor	=£232,984
Total	**= £610,355**

Depending on level of risk we are prepared to take, this provides the possibility of a further discount of:

671,390 – 610,355 = **£60,035**

Having agreed that this is an important project to assist in the re-launch of the firm, sufficient staffing to ensure the project runs smoothly and is delivered on time is important. Therefore, I propose the following team:

Senior Partner:	Zaha Hadon't
Junior Partner:	Norman Fostered
Associate:	**Amanda Lafeet**
Architect:	**Rob Annable**
Tech staff:	**David Beckham**
	Emile Heskey
	Ashley Cole

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internal memo: page 2 of 2
F.A.O -all partners
DATE - 02/11/03
RE. - proposed fee bid for Playa Doh project

A core team of 4 consisting of Amanda, Rob, David and Emile; with occasional input from the Partners and a further technician when required.

Due to the complexity of the retail project proposed by Will Alsoft and the recognition that it may be difficult to form a good working relationship midway through a design concept, a greater role for the Partners has been allowed for on this calculation.

Subsequently, this fee could possibly be reduced further if the Partners felt this was unnecessary.

Forward planning of the two halves of the project predicts that from inception to starting on site will take approximately 1 year. Followed by an 18 month contract period, and 12 months defect period.

The proposed program is based on a standard JCT 98 contract and a two stage tender. The program has also been formulated to demonstrate staged completions and partial possession opportunities, allowing the client to realise capital from the development earlier in the timetable. Thus, providing further incentive to the client when outlining the bid.

Rob

Rob Annable

Question 3

As lead designer you need to establish the design approach that is to be taken, both with your colleagues and the client and your design team meetings, design reviews provide the opportunity for health and safety design-risk management to be an integral part of the overall design process for the project.

***3.1** Write a letter to the design team members outlining how you expect them to fulfil their duties as a design under regulation 13 of the CDM Regulations 1994. Take the opportunity to identify the particular Health and Safety issues you wish them to include when considering their contributions to the design process. (Provide brief guide notes on the Health and Safety issues which enable you to write this letter).*

***3.2** Who do you include in your design review and how do you manage the risk assessment process?*

***3.3** What project hazards do you identify which you consider may affect the design decisions taken by the signature architect and provide examples of risk assessment forms produced which records this aspect of the design development?*

guitarchitecture
our buildings rock
666 Faust Street, Birmingham
tel/fax: 0121 666 666

Benjamin Dingmoment
Abitmore Structural Engineers
_____,
_____.

19/10/03

re. Playa Doh – mixed use development

Dear Ben,

Before commencing the design for the above project, it is necessary to outline the responsibilities the team members have to ensure compliance with the Construction (Design and Management) Regulations 1994. As you are no doubt aware, a member of the design team must comply with regulation 13, which states that a designer must:

- Take reasonable steps to ensure that clients are aware of their duties under CDM before starting the design work;
- Prepare designs with adequate regard to health and safety and to the information supplied by the client;
- Provide adequate information in or with the design;
- Co-operate with the planning supervisor and with the other designers so that each of them can comply with the duties under the Regulations. This includes any information needed for the Health and Safety file.

I have met with the client to discuss the first item[15] and have confirmed the contact details for his Planning Supervisor, who was appointed during the design work for the retail building. We have also provided him with a copy of HSE Construction sheet 39, which describes the duties of the client (the version describing the duties of the designer is sheet number 41, I can provide a copy if necessary[16]).

A meeting with all the design team members will shortly take place to discuss the risk assessment forms and the Health and Safety Issues that will need to be considered[17]. Please contact us with a date that would suit your schedule. Since there will be several overlaps of information supplied by each team member, it will be beneficial if we can identify some of these areas at an early stage.

[15] CDM Regulation 13(1)

[16] CDM Regulation 8(2) and 9(2)

[17] CDM Regulation 13(2c)

I've listed below, the headings under section 127 of the approved code of practice. I propose that the team could use the list as the basis of the agenda for future CDM meetings. I've also prepared a risk assessment of the stages already completed by Will Alsoft Architects[18] so that a comparison can be made during the meeting to ensure there is agreement before we proceed.

[18] CDM Regulation 13(2a)

see appendix 3 for risk assessment sheets examining the retail building on the north of the site

a) select the position and design of structures to minimize risks from site hazards…

Site traffic issues: compact site, difficult to position compound.
Access and egress difficult, due to busy roads adjacent site.

b) design out health hazards… and c) design out safety hazards…

Proximity to public highway.

d) consider prefabrication to minimise hazardous work or to allow it to be carried out in more controlled conditions off-site…

Construction of main structure off-site, however may present problems with delivery

e) design in features that reduce the risk of falling/injury where it is not possible to avoid work at height…

Scaffold protocols difficult to solve around edge of site,
allow for temporary loading of structure,
examine best solutions for cladding procedure

f) design to simplify safe construction…

lifting point positions for Teflon monocoque egg to be confirmed

g) design to simplify future maintenance and cleaning work..

Support for maintenance fall arrest system to be incorporated in glazed curtain wall structure.

h) identify demolition hazards for inclusion in the health and safety file…

Existing asbestos roof to be removed..

The items below each section are abridged notes about areas that the risk assessment has already highlighted and will require further action. The team must also come to an agreement about what info to send to planning supervisor and the delivery of each member's report[19].

[19] CDM Regulation 13(2b)

If you wish to discuss any of these items before the meeting, please contact me at the office.

Yours sincerely,

Rob Annable

c.c: Job Sworth – Planning Supervisor
Sum Yunguy – Services Engineer
B. Adder – Quantity Surveyor
Will Alsoft – Architect
Mr. N. B'stard - Client

3.2 *Who do you include in your design review and how do you manage the risk assessment process?*

The design review would include all members of the team that come under the definition stated in the CDM code of practice (section 109). These are designers who…

"…have a trade or a business which involves them in :

- preparing designs for construction work including variations – this includes preparing drawings, design details, specifications, bills of quantities and the specification of articles and substances, as well as all the related analysis, calculations, and preparatory work; or
- arranging for their employees or other people under their control to prepare designs relating to a structure or part of a structure."

This definition covers a wide range of people, including (paraphrased from section 110); architects, civil and structural engineers, landscape architects, other contributing design practices, anyone who specifies or alters the design, building service engineers, contractors carrying out design work, anyone purchasing materials where the choice has been left open, anyone specifying demolition and heritage organisations involved in specification.

As the project progresses the lead designer is responsible for ensuring that all the design team members are aware of their duties. A regular meeting to assess the changing scope of the Health and Safety issues is needed to co-ordinate each of the people in the above list as they enter or exit the project. Initially the client would also be included so that they may be informed of their duties and are aware that a Planning Supervisor must be appointed when the project begins. Once on board, the Planning Supervisors involvement in the assessment and collation of risk assessments is vital for the quality of the Health and Safety Plan.

It may also be useful for the design team to regularise the layout of the risk assessment sheets and agree the best form of analysis.

3.3 *What project hazards do you identify which you consider may affect the design decisions taken by the signature architect and provide examples of risk assessment forms produced which records this aspect of the design development?*

Risk Assessment sheets for the retail building have been completed,[20] and the following items caused greatest concern based on their position on the Risk Analysis sheet:

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Job No.666 ***Project name: Playa Doh (phase 1 – retail)*** ***Risk Analysis***

SEVERITY	LIKELIHOOD				
	Very Unlikely (freak – no known history)	Unlikely (Unlikely sequence of events)	Possible (Forseeable under unusual circumstances)	Likely (Easily foreseeable – odd incident may have occurred)	Very Likely (Common occurrence – aware of incidents)
None (No visible injury – no pain)	Insignificant	Insignificant	Low/Negligible	Low/Negligible	Low/Negligible
Slight (Minor cuts, bruises – no long term effects)	Insignificant	Low/Negligible	Low/Negligible	Medium/Tolerable	Medium/Tolerable
Moderate (Heavy bruising, deep flesh wound. Lost time accident)	Low/Negligible	Low/Negligible	Medium/Tolerable	High/Unacceptable	High/Unacceptable
Severe (Lost time accidents and major injuries)	Low/Negligible	Medium/Tolerable	High/Unacceptable	High/Unacceptable	High/Unacceptable
Very severe (Long term disability or death)	Low/Negligible	Medium/Tolerable	High/Unacceptable	High/Unacceptable	High/Unacceptable

This assessment and its recommendations have been completed on the understanding that a competent contractor will be appointed.
The Planning Supervisor should ensure that measures of competence cover experience in construction of the proposed scale and complexity.

Demolition.
Existing structures, asbestos roof, excessive level changes.
Site Traffic.
Compact site, difficult to position compound.
Excessive noise levels near adjacent housing.
Access and Egress
Busy trunk roads to the west and north, minor roads to the south and east.
Delivery/plant movement hazard to public. Cleaning of surrounding highway.
Heavy lifting.
Teflon coated monocoque egg: Delivery and erection difficulties.
Glazed curtain wall: Delivery and erection difficulties, proximity to public.

The decision to build against the North-West corner of this compact site means that the only suitable area for the compound is nearest to the residential properties and Mosque and could be accessed from a minor road. The designer should bear this in mind when specifying materials and extent of digging/cart away.

The space on site and other safety factors make pre-fabrication necessary, but this is also hampered by access issues. The proximity of the building line to the public space will mean over-sailing scaffolding and working overhead. The design of the pre-fabricated cladding system used should take into account the ease/speed of fixing. Consideration of the modular size of the cladding unit will reduce the need for excessive use of plant along the highway.

[20] see appendix 3 for RA sheets and analysis

note: all ratings describe the condition prior to any action being taken to amend the design, a revised assessment would be prepared each time the design is improved

Question 4

The client has instructed you proceed and produce the tender documentation for the approved scheme from stage E.

Produce a Project Plan up to commencement on site, enumerating:

- *the stages to be gone through*
- *the various parties to be consulted (including any consultants)*
- *the negotiations to be carried out*
- *the legislative approvals required*

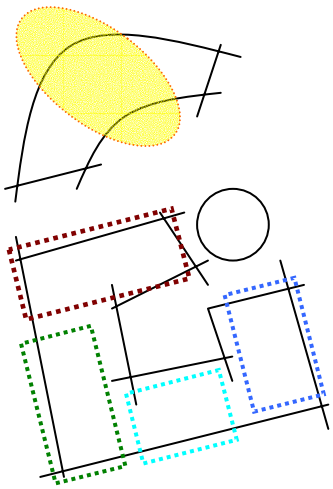
Six weeks into the production information programme, the following problems become apparent:

- *the scheme will not comply with current part L building regulations*
- *the risk assessment has an inordinate number of high risk items*
- *the QS, at the request of the clients has carried out a value engineering exercise requiring the omission of some of the design elements essential to the quality of the scheme*

List actions which need to be taken to deal with the changes to the approved scheme and write to the client informing him of what is involved.

Assumptions:

- Traditional contract[21]
- 2 stage tender allowing for feedback and contractor shortlist
- staged completion and partial possession of housing – progressing from Open Market shell and core sold from plan to fully fitted and finally affordable housing
- stage completion of retail buildings allowing partial possession of main 24 hour outlet
- negotiations between client and RSL's complete – landlord chosen for affordable housing

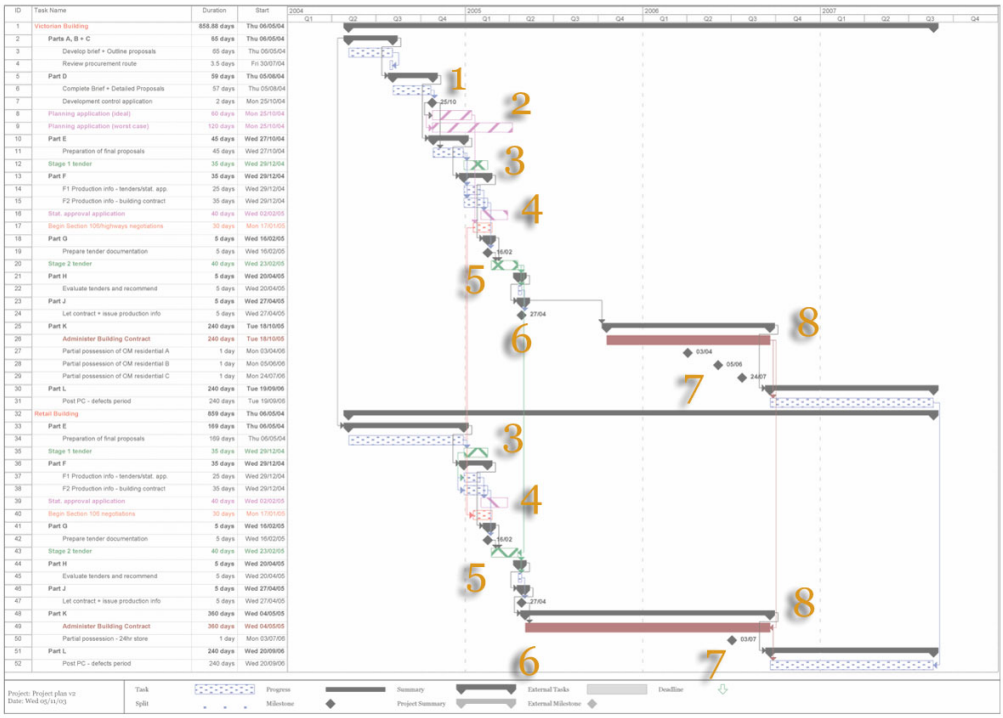


[21] see question 5

4a.

Produce a Project Plan up to commencement on site, enumerating:

- *the stages to be gone through*



Project plan key info (see A3 pull out):

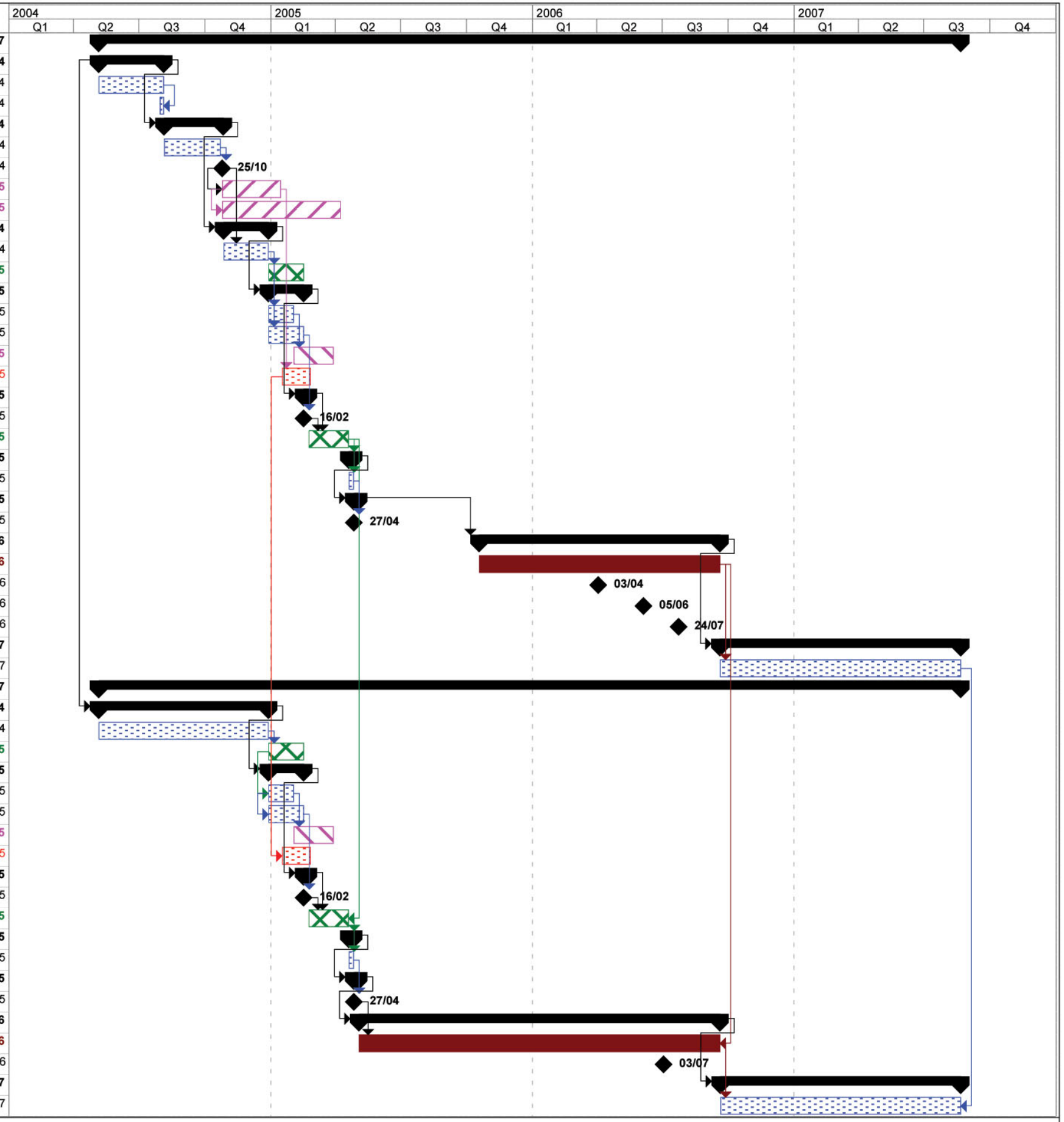
1. planning application
2. potential overrun of planning period
3. stage 1 tender
4. Statutory approval application
5. Stage 2 tender
6. Start on site
7. Partial possession of 3 stages of housing and main retail store
    a. Open Market - shell and core only
    b. Open Market - fitted
    c. Open Market – fitted
    d. 24 hour retail store
8. Hand over of full retail and affordable housing

4b.

- *the various parties to be consulted (including any consultants)*
- *the negotiations to be carried out*
- *the legislative approvals required*

Table of consultants/legislation relationships (see A3 pull out).

ID	Task Name	Duration	Start	Finish
1	**Victorian Building**	**858.88 days**	**Thu 06/05/04**	**Tue 21/08/07**
2	**Parts A, B + C**	**65 days**	**Thu 06/05/04**	**Wed 04/08/04**
3	Develop brief + Outline proposals	65 days	Thu 06/05/04	Wed 04/08/04
4	Review procurement route	3.5 days	Fri 30/07/04	Wed 04/08/04
5	**Part D**	**59 days**	**Thu 05/08/04**	**Tue 26/10/04**
6	Complete Brief + Detailed Proposals	57 days	Thu 05/08/04	Fri 22/10/04
7	Development control application	2 days	Mon 25/10/04	Tue 26/10/04
8	**Planning application (ideal)**	**60 days**	**Mon 25/10/04**	**Fri 14/01/05**
9	**Planning application (worst case)**	**120 days**	**Mon 25/10/04**	**Fri 08/04/05**
10	**Part E**	**45 days**	**Wed 27/10/04**	**Tue 28/12/04**
11	Preparation of final proposals	45 days	Wed 27/10/04	Tue 28/12/04
12	**Stage 1 tender**	**35 days**	**Wed 29/12/04**	**Tue 15/02/05**
13	**Part F**	**35 days**	**Wed 29/12/04**	**Tue 15/02/05**
14	F1 Production info - tenders/stat. app.	25 days	Wed 29/12/04	Tue 01/02/05
15	F2 Production info - building contract	35 days	Wed 29/12/04	Tue 15/02/05
16	**Stat. approval application**	**40 days**	**Wed 02/02/05**	**Tue 29/03/05**
17	Begin Section 106/highways negotiations	30 days	Mon 17/01/05	Fri 25/02/05
18	**Part G**	**5 days**	**Wed 16/02/05**	**Tue 22/02/05**
19	Prepare tender documentation	5 days	Wed 16/02/05	Tue 22/02/05
20	**Stage 2 tender**	**40 days**	**Wed 23/02/05**	**Tue 19/04/05**
21	**Part H**	**5 days**	**Wed 20/04/05**	**Tue 26/04/05**
22	Evaluate tenders and recommend	5 days	Wed 20/04/05	Tue 26/04/05
23	**Part J**	**5 days**	**Wed 27/04/05**	**Tue 03/05/05**
24	Let contract + issue production info	5 days	Wed 27/04/05	Tue 03/05/05
25	**Part K**	**240 days**	**Tue 18/10/05**	**Tue 19/09/06**
26	**Administer Building Contract**	**240 days**	**Tue 18/10/05**	**Tue 19/09/06**
27	Partial possession of OM residential A	1 day	Mon 03/04/06	Mon 03/04/06
28	Partial possession of OM residential B	1 day	Mon 05/06/06	Mon 05/06/06
29	Partial possession of OM residential C	1 day	Mon 24/07/06	Mon 24/07/06
30	**Part L**	**240 days**	**Tue 19/09/06**	**Tue 21/08/07**
31	Post PC - defects period	240 days	Tue 19/09/06	Tue 21/08/07
32	**Retail Building**	**859 days**	**Thu 06/05/04**	**Tue 21/08/07**
33	**Part E**	**169 days**	**Thu 06/05/04**	**Tue 28/12/04**
34	Preparation of final proposals	169 days	Thu 06/05/04	Tue 28/12/04
35	**Stage 1 tender**	**35 days**	**Wed 29/12/04**	**Tue 15/02/05**
36	**Part F**	**35 days**	**Wed 29/12/04**	**Tue 15/02/05**
37	F1 Production info - tenders/stat. app.	25 days	Wed 29/12/04	Tue 01/02/05
38	F2 Production info - building contract	35 days	Wed 29/12/04	Tue 15/02/05
39	**Stat. approval application**	**40 days**	**Wed 02/02/05**	**Tue 29/03/05**
40	Begin Section 106 negotiations	30 days	Mon 17/01/05	Fri 25/02/05
41	**Part G**	**5 days**	**Wed 16/02/05**	**Tue 22/02/05**
42	Prepare tender documentation	5 days	Wed 16/02/05	Tue 22/02/05
43	**Stage 2 tender**	**40 days**	**Wed 23/02/05**	**Tue 19/04/05**
44	**Part H**	**5 days**	**Wed 20/04/05**	**Tue 26/04/05**
45	Evaluate tenders and recommend	5 days	Wed 20/04/05	Tue 26/04/05
46	**Part J**	**5 days**	**Wed 27/04/05**	**Tue 03/05/05**
47	Let contract + issue production info	5 days	Wed 27/04/05	Tue 03/05/05
48	**Part K**	**360 days**	**Wed 04/05/05**	**Tue 19/09/06**
49	**Administer Building Contract**	**360 days**	**Wed 04/05/05**	**Tue 19/09/06**
50	Partial possession - 24hr store	1 day	Mon 03/07/06	Mon 03/07/06
51	**Part L**	**240 days**	**Wed 20/09/06**	**Tue 21/08/07**
52	Post PC - defects period	240 days	Wed 20/09/06	Tue 21/08/07



Project: Project plan v2
Date: Sat 08/11/03

Task
Split
Progress
Milestone
Summary
Project Summary
External Tasks
External Milestone
Deadline

Question 4 - negotiations and legislation [see project plan for further details]

	Client	Architect	Quantity Surveyor	Structural Engineer	Services Engineer	Planning Supervisor	Development Control	Building Control	Local Government Office	RSL	Contractor	Fire Authority	Licensing Justices
Client		Fee scale, Procurement route	Fee scale, Budget, Procurement	Fee scale	Fee scale	CDM Risk Assess	Planning Approval Section 106			Section 106 Tenant mix	Tender, Contract duration		
Architect	Fee scale, Procurement route		Budget, Procurement	Design, Risk Assess	Design, Risk Assess	CDM Risk Assess	Pre-app discussions Planning Approval	Pre-app discussions Bldg.Regs Approval	Highways Dept.	SDS spec, Lifetime Homes Tenant Mix	Design, Tender, A.I's, Defects		
Quantity Surveyor	Fee scale, Budget, Procurement	Budget, Procurement		Budget, Procurement	Budget, Procurement	CDM Risk Assess				Budget, Procurement	Budget, Procuremen t		
Structural Engineer	Fee scale	Design, Risk Assess	Budget, Procurement		Design, Risk Assess	CDM Risk Assess	Pre-app discussions	Pre-app discussions	Highways Dept. Section 247		Design		
Services Engineer	Fee scale	Design, Risk Assess	Budget, Procurement	Design, Risk Assess		CDM Risk Assess		Pre-app discussions			Design		
Planning Supervisor	CDM Risk Assess H&S File	CDM Risk Assess	CDM Risk Assess	CDM Risk Assess	CDM Risk Assess					CDM Risk Assess H&S File	CDM H&S File H&S Plan		
Development Control	Planning Approval Section 106	Pre-app discussions Planning Approval		Pre-app discussions						Section 106 Room zizes			
Building Control		Pre-app discussions Bldg.Regs Approval		Pre-app discussions	Pre-app discussions						Inspection s, Bldg.Regs Approval		
Local Government Office		Highways Dept. Section 247		Highways Dept. Section 247									
Registered Social Landlord	Section 106 Tenant mix	SDS spec, Lifetime Homes Tenant Mix	Budget, Procurement			CDM Risk Assess	Section 106 Room zizes						
Contractor	Tender, Contract duration	Design, Tender, A.I's, Defects	Budget, Procurement	Design	Design	CDM Risk Assess		Inspections, Bldg.Regs Approval				Approva l	Licence app
Fire Authority	Approval	Approval									Approval		
Licensing Justices	Licence app	Licence app									Licence app		

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Nasty B'stard,
Screw Yew Development Company
_____,
_____.

07/02/05

re. Playa Doh – production info changes

Dear Nasty,

Following yesterdays design team meeting to discuss the latest production information drawings, I am writing to clarify the list of actions which must be taken to deal with the changes required. The items raised in your latest correspondence, along with comments from the pre-application discussions with Building Control were all examined.

- the risk assessment has an inordinate number of high risk items.

Your planning supervisor, Job Sworth, was in attendance at the meeting and I raised your concerns over the current status of the risk assessments. He confirmed that the main items that remain listed as high risk, are those related to the proximity of the building to the public realm and the erection of the Teflon coated monocoque egg. The key action items remaining are related to the competence of the contractor and the confirmation of lifting and scaffolding protocols. The prefabrication of the monocoque structure, whilst difficult, will cause only temporary disruption and can be tightly controlled. As of yet we have had no adverse comments from those contractors involved in the stage 1 tender. At this stage, his opinion on the matter coincides with mine. It is sufficient within the remit of CDM to acknowledge and prepare for risk, the aim is not to seek to completely remove it.

This item will be discussed further when we receive the comments from the short-listed contractors from the stage 1 tender.

- The QS, at the request of the client has carried out a value engineering exercise requiring the omission of some of the design elements essential to the quality of the scheme.

Unfortunately, a large proportion of yesterday's meeting was taken up in discussing the proposals prepared by the Q.S., Mr.Adder. Whilst I understand that you wish to keep a tight control on the budget for this project, I must take this opportunity to stress the importance of liaising with the whole design team. Unilateral decisions will cause confusion within the team and may also result in abortive work.

Whilst I recognise the decision to coat the monocoque structure in Teflon would appear to be a possible area to make savings, Mr.Adder was unfortunately unaware of the study on the local Pigeon population we have just completed. The savings on life cycle maintenance costs will be considerable. His suggestion of G.R.P as an alternative has been recorded, but I fear it will not stand up to the heat differential across the light and dark sides of the egg, and may crack. The quality of the retail building is crucial if the value of employing your signature architect, Will Alsoft, is to be realised.

However, I can report that his suggestion for cladding the interior from second-hand woollen scarves - making the most of an international down turn in the scarf market due to global warming - will be examined further.

If I can be of any assistance with further discussions on cost reduction, feel free to contact me at the office and we can arrange a meeting.

- *the scheme will not comply with current part L regulations*

As we have discussed at previous meetings, the recent changes to Part L (Conservation of Fuel and Power) have placed greater pressure on developers to improve the energy efficiency of their specification. Now that we have received sufficient information from the RSL regarding the 25% affordable housing, we have been able to complete the SAP calculations. Unfortunately these are falling short of the required target for two main reasons; glazing area and boiler specification.

The planning approval shows the retention of the existing, large single glazed windows, important for the upkeep of the buildings character. Whilst we have increased the specification of insulation elsewhere on the building, it is now clear that secondary glazing will be required. On those apartments facing North into the courtyard, an increase in boiler specification will also be needed. Sum Yunguy, the services engineer, has provided a specification for a condensing, combination boiler with greatly improved emissions ratings.

The decision to run a two stage tender will benefit us here. There is still sufficient time to request the stage 1 tender contractors add these two items to their quotes, since neither issue's require drawings immediately. Building Control have confirmed they are willing to commence the application and accept the window and boiler details as soon as they are available. The current program is unaffected. The key issue is ensuring the secondary glazing does not hamper the requirements of Part B. We have also been liaising with Building Control over the use of the 'Robust Details' catalogue (another new section of Part L). Adhering to these guidelines will prevent you from needing to perform on-site pressure testing to the completed dwellings.

If these proposals meet with your approval, then I'm happy to report that all team members are still meeting the program deadlines and we are on course to submit for statutory approvals. The receipt of the stage 1 tenders will shortly require another meeting with yourself and Mr.Adder.

Yours sincerely,

Rob Annable

Question 5

Contract Documentation

Your developer is aware that there are a number of potential procurement routes for the delivery of the project including the traditional route with your practice acting as agent as well as Design and Build.

1. *Outline four alternative procurement processes for the delivery of the construction project and advise your client as to the advantages and disadvantages of each.*
2. *Recommend the procurement route which you believe would be most appropriate for the delivery of this project and provide supporting justification for your recommendation.*

FAX: GUITARCHITECTURE

F.A.O – Nasty B'stard

As requested, key points outlining various procurement paths for you to consider. Will put forward our preference by letter later this week when you've had time to look at them. ---- Rob

	Advantages	Disadvantages
1.Traditional	Scheme fully pre-designed and specified Like-for-like tenders Early commitment to maximum price Increased estimating accuracy Better control of quality Several ready made contracts available for use Provides contractually agreed prices for valuation of variations, cost control and analysis Two-stage tendering allows Contractor to have input in to design and buildability	Slow because design and construction sequential Can cause conflict – adversarial Contractor has no input on design

	Advantages	Disadvantages
2.Management Contracting	Design & construction overlapped – rapid procurement Contractor's expertise influences design – cost savings Contractor in team reduces adversarial nature of process Client retains control of design Late changes in design can be accommodated	Client assumes high level of TCQ performance risk Client involvement high Possible time pressures on design

	Advantages	Disadvantages
3.Design & Build	Transfer of risk to Contractor (but not usually all risks) Design is in competition Maximum overlap of design and construction Construction expertise available for design Early commitment to maximum price Less construction information required from the client. Client has single point of contact with team	Tendering expensive to Contractors (costs will be passed on the clients) Design not fully developed at tender stage, uncertain of exact final details until construction completed Best designer is not necessarily best builder and vice-versa Design liability can be limited Standards can be difficult to control Variations can have greater consequence and cost Normally only the minimum is provided to satisfy Employer's Requirements Premium for assumption of risk payable Adversarial attitudes remain, perhaps worse than traditional

	Advantages	Disadvantages
4.Construction management Same as management contracting except that client employs each package contractor directly	Client can exercise high degree of control over entire procurement process	Client share of risk is even higher than MC Client commitment/involvement is very high

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Nasty B'stard,
Screw Yew Development Company
_____,
_____.

05/02/04

re. Playa Doh – procurement options

Dear Nasty,

Following your request to make an appraisal of the best procurement path for this project, and my subsequent faxes outlining 4 different options, I would like to offer my assessment

Based on the project brief we have formulated at previous meetings, it is clear that quality is something that is of concern to you. The work prepared in the early stages by Will Alsoft Architects has generated a landmark proposal that will require careful execution. The quality of workmanship will be crucial to its success.

The best form of procurement for maintaining control of build quality is Traditional. I shall expand on some of the other benefits mentioned in the comparative tables

- Increased estimating accuracy

Some of the construction solutions that may be necessary to achieve the vision put forward by Alsoft will undoubtedly be new to some contractors. The preparation of the full design drawings will help contractors provide a more accurate quote.

- Like-for-like tenders

For similar reasons as those outlined above, a clearer assessment of the tenders will be possible and greater confidence in the proposed budget can be gained.

- Two-stage tendering allows Contractor to have input in to design

One of the disadvantages of the Traditional procurement method in its basic form, is the lack of input from the contractor

during the design stage. Sharing expertise is important for both the quality and also the team relationships. Traditional procurement is most often criticized for the adversarial nature of the contract. However, we are proposing a two stage tender process within this procurement model; going some way to gaining the benefits of methods such as Design & Build.

If we are in agreement over this appraisal and you wish to continue with the Traditional method, then we will be happy to offer the full design service under a JCT 98 Contract.

If you wish discuss any of the items in the appraisal further, please don't hesitate to call the office.

Your sincerely,

Rob Annable

Bibliography

The Architect in Practice 8th edition – David Chappell and Andrew Willis, Blackwell Publishing 2003

Architects Job Book (7th) – RIBA publications 2000

A Guide to RIBA Forms of Appointment 1999 – RIBA publ. 1999

Understanding JCT Standard Building Contracts 7th ed. – David Chappell, Spon Press 2003

A Client's Guide to Engaging an Architect – RIBA publ. 2000

http://www.iso.ch - ISO 9001:2000

http://www.cpduk.co.uk – CPD info.

http://www.iipuk.co.uk – Investors in people

http://www.building.co.uk – Building magazine

Assistance was also provided through discussions with work colleagues at Axis Design Collective, Steve Clark and Paul Ingleston (Quantity Surveyors) at Dearle and Henderson; and with my peers on the PG Dip course via a specially created website message-board I created.

Semantics:

Play|a|doh

Play a dough

Play a Doh!

Playa = beach in Spanish

Playdoh = amorphous blobs

Doh! = exclamation of frustration coined by Homer Simpson

appendix 1

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team members:

Senior Partner
Bernard SueMe

Senior Partner
Zaha Hadon't

Junior Partner
Norman Fostered

Junior Partner
Richard Rogered

Junior Partner
Nicholas Rickshaw

Associate
Amanda Lafeet

Associate
Piers Cough

Architect
Rob Annable

Technical staff (varying experience)
David James
Sol Campbell
Ashley Cole Gary Neville Phil Neville
David Beckham Kieron Dyer Nicky Butt Paul Scholes
Emile Heskey Michael Owen

Admin
Tom Dick Harry

appendix 2

Salaries

		Salary	Car Allow.	Car	N.I	Total Cost	
Tech Staff							
Norman Fostered		39,000		6,000	4,950	49,950	1
Richard Rogered		37,500		5,500	4,758	47,758	2
Nicholas Rickshaw		38,000		5,500	4,822	48,322	3
Amanda Lafeet		29,000	4,500		3,670	37,170	4
Piers Cough		28,000	2,500		3,542	34,042	5
Rob Annable		23,000	1,500		2,902	27,402	6
David James		20,000			2,518	22,518	7
Sol Campbell	Assist.	18,000			2,262	20,262	8
Ashley Cole	Assist.	17,500			2,198	19,698	9
Gary Neville	Assist.	19,000			2,390	21,390	10
Phil Neville	Assist.	19,000			2,390	21,390	11
David Beckham		30,000	2,500		3,798	36,298	12
Kieron Dyer		20,000			2,518	22,518	13
Nicky Butt		21,000			2,646	23,646	14
Paul Scholes		20,000			2,518	22,518	15
Emile Heskey		24,000			3,030	27,030	16
Michael Owen		27,000	3,500		3,414	33,914	17
Extra 5% O/T & Temp		21,500				21,500	
		451,500	14,500	17,000	54,333	**537,333**	
Admin							
Tom		16,000			2,006	18,006	
Dick		15,500			1,942	17,442	
Harry		18,500			2,326	20,826	
Extra 5% O/T & Temp		2,500				2,500	
		52,500	0	0	6,275	**58,775**	
Staff Total						**596,108**	
Partners							
Bernard SueMe		45,000			5,718	50,718	18
Zaha Hadon't		45,000			5,718	50,718	19
		90,000	0	0	11,437	**101,437**	
Total						**697,545**	

Budget Income and Expenditure

	Total	Sub Total	%
Billings	1050500		
	1050500	**1050500**	
Rent	82000		7.81%
Rates	30000		2.86%
Car Parking	5000		0.48%
Cleaning	11000		1.05%
Repairs	2750		0.26%
Depreciation - equipment	13500	144250	1.29%
Salaries - Technical	**483000**		**45.98%**
Salaries - Administration	**52500**		**5.00%**
N.I - Technical	**54333**		**5.17%**
N.I - Administration	**6275**	**596108**	**0.60%**
Local Marketing	6500		0.62%
Travel	8500		0.81%
Motor Vehicles	31500		3.00%
Depreciation - Motor Vehicles	8000		0.76%
Postal Charges	6000		0.57%
Telephone	25000		2.38%
General Office Supplies	3400		0.32%
I.T costs	46000		4.38%
Equipment Rental	6000		0.57%
Subscriptions - professional	3000	143900	0.29%
Subscriptions - other	7520		0.72%
Misc.	5500		0.52%
Donations	1000		0.10%
Professional Indemnity Insurance	30000	36500	2.86%
	928278	920758	88.37%
Profit	**122222**	**129742**	**11.63%**
Partner Salaries	101437	101437	9.66%
	20785	**28305**	**1.98%**
Grand Total	**1050500**	**1050500**	**100.00%**
for question 2:			
Net overheads (incl. secretarial costs)	**390945**		37.22%
Salaries	**638770**		60.81%

appendix 3

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Job No.666 ***Project name: Playa Doh (phase 1 – retail)***

SEVERITY	LIKELIHOOD				
	Very Unlikely (freak – no known history)	Unlikely (Unlikely sequence of events)	Possible (Forseeable under unusual circumstances)	Likely (Easily foreseeable – odd incident may have occurred)	Very Likely (Common occurrence – aware of incidents)
None (No visible injury – no pain)	Insignificant	Insignificant	Low/Negligible	Low/Negligible	Low/Negligible
Slight (Minor cuts, bruises – no long term effects)	Insignificant	Low/Negligible	Low/Negligible	Medium/Tolerable	Medium/Tolerable
Moderate (Heavy bruising, deep flesh wound. Lost time accident)	Low/Negligible	Low/Negligible	Medium/Tolerable	High/Unacceptable	High/Unacceptable
Severe (Lost time accidents and major injuries)	Low/Negligible	Medium/Tolerable	High/Unacceptable	High/Unacceptable	High/Unacceptable
Very severe (Long term disability or death)	Low/Negligible	Medium/Tolerable	High/Unacceptable	High/Unacceptable	High/Unacceptable

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Job No.666 ***Project name: Playa Doh (phase 1 – retail)***

Step 0 Design Element	Step 1 Hazards What could cause harm?	Step 2 Who might be harmed and how?	Step 3 Risk*: High/Medium/Low	Further actions required:
1.Ground Conditions	**Contaminated Land.** City centre Brownfield site – previous industrial use.	Ground workers during site preparation. Possible gas build up released during site scrape and foundations.	High	Historical and physical survey, testing to predict presence of gas/contamination. Possible need for decontamination before construction begins.
2. Hazardous Materials	**Demolition.** Existing structures, asbestos roof, excessive level changes.	Demolition staff, contractor's staff, public and any team member visiting site. Inhalation/ingestion.	High	Site cleared and regarded. Contractor's site procedures to be followed. Correct guidelines for disposal of waste to be used.
3.Site Context	**Site Traffic.** Compact site, difficult to position compound. Excessive noise levels near adjacent housing.	Contractor's staff and any site visitor. Danger to pedestrians from plant traffic. Noise nuisance for local inhabitants.	High	Clear demarcation of site traffic routes on site. Careful planning of compound position. Strict application of construction time restrictions to avoid unreasonable working hours. Pre-fabrication of components to decrease in-situ work.

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Step 0 Design Element	Step 1 Hazards What could cause harm?	Step 2 Who might be harmed and how?	Step 3 Risk*: High/Medium/Low	Further actions required:
3.Site Context (cont'd)	**Access and Egress** Busy trunk roads to the west and north, minor roads to the south and east. Delivery/plant movement hazard to public.	Public pedestrians and road users. Contractors staff. Delivery vehicles. Visiting design team members. Potential road traffic accident.	High	Early discussions with Local Government Office to discuss temporary closures of highway where necessary.
	Adjacent Properties. Busy retail area to North and west. Residential to East. Mosque in use to South	Public. Dust Fumes/ Inhalation. Falling object hazard. Noise nuisance.	Medium.	Site boundary to provide adequate protection – including covers over adjacent pedestrian areas. Correct working controls to be in place. Site timetable to respect Mosque use – consider working time directives.

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Step 0 Design Element	Step 1 Hazards What could cause harm?	Step 2 Who might be harmed and how?	Step 3 Risk*: High/Medium/Low	Further actions required:
4.Existing Services	**Buried Services** Brownfield site with previous industrial use. Live cables, gas lines, foul and storm drainage.	Contractor's staff and sub contractors. Public. Breakage of services and during below ground works.	Medium.	Early discussions with Local Government Office to discuss temporary closures of highway where necessary. Confirmation of service positions with survey and info from Stats Undertakers.
	Overhead Cables. None present.	-	-	-

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Step 0 Design Element	Step 1 Hazards What could cause harm?	Step 2 Who might be harmed and how?	Step 3 Risk*: High/Medium/Low	Further actions required:
5.Foundations	**Confined spaces** Deep excavations for new build foundations.	Ground works staff and inspectors. Danger of collapse and burial.	Medium.	Trench supports as necessary.
	Noise and Vibration. Excavation and piling, vibro-compaction.	Nearby buildings and inhabitants – particularly Mosque and residential.	Low	Consider Working Time directive.
6.External walls	**Heavy Lifting.** Glazed curtain wall: Delivery and erection difficulties.	Contractor's staff, public and inspectors. Falling objects.	High	Scaffold protocols to be confirmed by contractor.
	Teflon monocoque egg: Delivery and erection difficulties.	Contractor's staff, public and inspectors. Traffic danger during crane usage.	High	Re-examine design to include lifting points.

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Step 0 Design Element	Step 1 Hazards What could cause harm?	Step 2 Who might be harmed and how?	Step 3 Risk*: High/Medium/Low	Further actions required:
6.External walls (cont'd)	**Working at height.** Fall during cladding of external walls	Contractor's staff and sub contractors, inspectors.	Medium.	Scaffolding / Craning protocols to be confirmed by contractor.
	Cleaning and maintenance. Falls.	Client's maintenance staff. Public pedestrians.	Medium	Fall arrest system and roof access system specified.
7.Roofing	**Working at height.** Falls from height and falling objects.	Contractors staff and sub contractors, inspectors – fall from scaffold.	Medium	Lifting: No specific atypical risk for competent contractor. Falls: Scaffold protocol TBC by contractor. Falling objects: Contractors H&S procedures to be confirmed.

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Step 0 Design Element	Step 1 Hazards What could cause harm?	Step 2 Who might be harmed and how?	Step 3 Risk*: High/Medium/Low	Further actions required:
7. Roofing (cont'd)	**Fragile roofing materials.** None Specified.	-	-	-
8. Staircases	**Overloading/collapse.** Overloading with site materials.	Contractor's staff and sub contractors, inspectors. Collapse of structure.	Low	SWL to be displayed.
	Working at height. Unprotected stairs.	Contractors staff and sub contractors, inspectors – fall from stairs.	Medium	Guarded to Part K. .

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Step 0 Design Element	Step 1 Hazards What could cause harm?	Step 2 Who might be harmed and how?	Step 3 Risk*: High/Medium/Low	Further actions required:
9. Steelwork	**Heavy Lifting.** Lifting of structure.	Contractor's staff and sub-contractor.	Medium	Section sizes and length kept to a minimum.
	Delivery. Access and egress with large vehicles for delivery.	Public. Potential for damage to nearby buildings and/or road traffic accident.	High	Delivery times to avoid rush hour traffic. Section sizes and length kept to minimum.
	Lightning strike Exposed steelwork.	Public. Client.	Low	Consider lightning conductors.
10. High level glazing.	**Cleaning and maintenance.** Access/falls.	Client's maintenance team. Fall from height.	Medium	Fall arrest system specified.

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