

Contents

1	Project Basics	1
1.1	Construction Industry	2
1.1.1	English in the Construction Industry	2
1.2	Project Structure	3
1.2.1	RIBA Plan of Work	4
1.3	Project Participants	4
1.3.1	Client	5
1.3.2	Planning Team	5
1.3.3	Construction Team	6
1.3.4	Exercise: Project Participants	6
1.4	Project Organisation	7
1.4.1	Design and Build Contract	8
1.5	Workplace	9
1.5.1	Grammar: Simple versus Continuous Present	9
1.5.2	Exercise: Simple versus Continuous Present	10
1.6	Project Initiation	10
1.6.1	Collocations	11
1.6.2	Exercise: Collocations	11
2	Town Planning	15
2.1	Basics of Town Planning	16
2.1.1	History of Town Planning	16
2.1.2	Urbanisation	17
2.1.3	Statistics	18
2.2	Principles of Town Planning	19
2.2.1	Terminology: Urban Planning	20
2.2.2	Fixed Factors in Urban Planning	20
2.2.3	Confusing Words	22
2.2.4	Variable Factors	22
2.3	Building Authorities	23
2.3.1	Rules and Regulations	24
2.3.2	Listed Buildings and Conservation Areas	24
2.4	Planning Developments	25
2.4.1	Grammar: Word Order	26
2.4.2	Exercise: Word Order	27
2.5	Key Issues in Urban Design	27
2.5.1	Affordable Housing	28
2.5.2	Mixed Use	28
2.5.3	Densification	29
2.5.4	Public Participation	29
3	Briefing	33
3.1	Project Definition	34
3.1.1	Client's Needs	35

3.2	Plot	36
3.2.1	Site Visit.....	36
3.2.2	Comprehension Questions: Site Visit	38
3.2.3	Exercise: Plot Description	38
3.2.4	Homophones.....	39
3.3	Feasibility	39
3.3.1	Grammar: Questions	40
3.3.2	Exercise: Questions and Answers	40
3.4	Survey	41
3.4.1	Conversation: Consulting Local Authorities	42
3.4.2	Comprehension Questions: Consulting Local Authorities	44
3.5	Communicating with the Client	44
3.5.1	Writing Emails.....	45
3.5.2	Exercise: Writing Emails.....	46
4	Concept Design	49
4.1	Appearance	50
4.1.1	Presentation Forms.....	50
4.2	Sustainability	51
4.2.1	Energy-Efficient Buildings	51
4.2.2	Compactness	52
4.2.3	Orientation	52
4.2.4	Building Certificates	53
4.2.5	Exercise: Collocations for Sustainable Buildings	54
4.3	Consultants	55
4.3.1	Appointing a Consultant	56
4.3.2	Standard Telephone Phrases.....	57
4.3.3	Exercise: Telephone Call	57
4.4	Building Costs	58
4.4.1	Cost Items	59
4.4.2	Fees	60
4.4.3	Loans.....	60
4.4.4	Cost Management	60
4.4.5	Exercise: Construction Costs	61
5	Preliminary Design	65
5.1	Appearance	66
5.1.1	Word Families: Size	66
5.1.2	Exercise: Size	67
5.2	Numbers and Units	68
5.2.1	Numbers.....	68
5.2.2	Ordinal Numbers	68
5.2.3	Mathematical Symbols.....	69
5.2.4	Units	70
5.2.5	Exercise: Numbers and Units.....	71
5.3	Comparisons	71
5.3.1	Exercise: Comparisons	73

5.4	Shapes	74
5.4.1	Geometry Terms	75
5.4.2	Design Description	75
5.4.3	Relations	75
5.4.4	Areas and Volumes	76
6	Structural Design	79
6.1	Structural Systems	80
6.2	Statics	81
6.2.1	Loads.....	81
6.2.2	Supports	82
6.2.3	Reactions.....	83
6.2.4	Structural Analysis	84
6.3	Strength of Materials	85
6.3.1	Modulus of Elasticity	85
6.3.2	Buckling	86
6.3.3	Grammar: Capitalisation	87
6.3.4	Exercise: Capitalisation	88
6.4	Structural Elements	88
6.4.1	Bearing Elements	89
6.4.2	Foundations	89
6.4.3	Spanning Elements.....	90
6.4.4	Truss	91
6.5	Structures	91
6.5.1	Exercise: Structure of a Single-Family Home.....	92
6.6	Connections	93
7	Building Components	97
7.1	Carcass	98
7.1.1	Walls.....	99
7.2	Building Envelope	99
7.2.1	Prefixes	100
7.2.2	Exercise: Prefixes.....	100
7.3	Roofs	101
7.3.1	Roof Shapes.....	101
7.3.2	Roof Parts	102
7.3.3	Exercise: Planted Roof.....	103
7.4	Doors and Windows	103
7.4.1	Doors	104
7.4.2	Windows	105
7.4.3	Shading Devices	106
7.5	Circulation	107
7.5.1	Stair Layout.....	108
7.5.2	Stair Design	109
8	Final Design	111
8.1	Coordination	112

8.1.1	Coordination via Email	113
8.1.2	Meetings.....	114
8.1.3	Exercise: Phrasal Verbs.....	115
8.1.4	BIM.....	115
8.2	Final Design Presentation	116
8.2.1	Visuals.....	116
8.2.2	Plans.....	117
8.2.3	Presentation Language.....	117
8.2.4	Standard Presentation Phrases	118
8.2.5	Presentation: Final Design	119
8.3	Alterations	121
8.3.1	Exercise: If-clauses.....	122
8.4	Planning Permission Application	122
8.4.1	Building Regulations.....	124
8.4.2	Granting Planning Permission.....	125
8.4.3	Idioms.....	126
8.4.4	Exercise: Idioms.....	126
8.5	Fire Safety	127
8.5.1	Fire Protection	128
8.5.2	Fire Resistance Rating.....	128
8.5.3	Escape Routes.....	129
8.5.4	Exercise: Fire Safety.....	129
9	Building Materials	133
9.1	Construction Materials	134
9.1.1	Material Properties	135
9.1.2	Environmental Issues.....	136
9.2	Concrete	137
9.2.1	Stressed Concrete	138
9.2.2	The Cement Issue and Recycling Concrete.....	139
9.3	Steel	140
9.3.1	Steel Members	140
9.3.2	Exercise: Steel Members	141
9.3.3	Recyclability and Corrosion of Steel	141
9.4	Brick	142
9.5	Timber	142
9.5.1	Engineered Wood.....	143
9.5.2	Exercise: Timber Products and Uses	144
9.6	Additional Materials	145
9.6.1	Smart Materials.....	145
9.6.2	Combining Materials.....	146
9.7	Detail Drawings	146
9.7.1	Exercise: Details.....	147
9.7.2	Conversation: Detail Design.....	147
9.8	Technical Standards	149
9.8.1	U-Values.....	149
9.8.2	Example: U-Value Calculation.....	150

10	Building Services	153
10.1	Building Services Engineering	154
10.1.1	Plant Room	154
10.2	Plumbing	155
10.2.1	Drinking Water Supply	155
10.2.2	Plumbing Fixtures	156
10.2.3	Water Disposal.....	156
10.2.4	Exercise: Plumbing.....	157
10.3	Thermal Comfort	158
10.3.1	Heating System.....	159
10.3.2	Fuel.....	159
10.3.3	Heat Generator.....	160
10.3.4	Solar Collectors	161
10.3.5	Exercise: Heating	161
10.3.6	Heat Pump System	162
10.4	Ventilation	162
10.4.1	HVAC Systems.....	163
10.4.2	Exercise: HVAC Systems.....	164
10.5	Electricity	164
10.5.1	Wiring	165
10.5.2	Exercise: Electrical Layout	165
10.5.3	Photovoltaic.....	166
10.5.4	Lightning Protection System	166
10.6	Building Services in Energy-Efficient Buildings	167
10.6.1	Conversation 1: Building Services	167
10.6.2	Comprehension Questions: Building Services.....	169
10.6.3	Conversation 2: Building Services	170
11	Procurement Process	175
11.1	Procurement	176
11.1.1	Tendering Procedure	177
11.2	Tender Documents	177
11.2.1	Specifications.....	178
11.2.2	Bills of Quantities.....	178
11.3	Language in Tender Documents	179
11.3.1	Grammar: Active versus Passive.....	180
11.3.2	Exercise: Active versus Passive.....	180
11.4	Selection of Contractors	181
11.4.1	Advising the Client	181
11.4.2	Business Letters	183
11.4.3	Exercise: Business Letter	184
11.5	Pricing	185
11.5.1	Unit Rates	185
11.5.2	Comparative Analysis of Tenders.....	186
11.5.3	Exercise: Comparative Analysis of Tender Prices.....	186
11.6	Negotiation	187
11.6.1	Language in Negotiations.....	187

11.6.2	Exercise: Diplomatic Approach	188
11.6.3	Conversation: Price Negotiation	189
11.6.4	Comprehension Questions: Price Negotiation	190
11.7	Building Contract	190
11.7.1	FIDIC	190
11.7.2	Contract Terminology	191
11.7.3	Exercise: Contract Terminology	193
12	Pre-Construction	195
12.1	Background to Building Operations	196
12.1.1	Responsibilities	196
12.1.2	Grammar: Present Perfect	197
12.1.3	Exercise: Present Perfect	198
12.2	Time Management	198
12.2.1	Time Terms	199
12.2.2	Exercise: Time Terms	200
12.3	Construction Programme	200
12.3.1	Project Bar Chart	201
12.3.2	Prepositions of Time	201
12.3.3	Exercise: Prepositions of Time	202
12.4	Site Set-Up	203
12.4.1	Construction Site Preparation	204
12.4.2	Exercise: Setting Out	204
12.4.3	Construction Site	205
12.4.4	Prepositions of Place	206
12.4.5	Exercise: Prepositions of Place	206
12.5	Site Safety	207
12.5.1	Exercise: Site Safety	208
12.5.2	Insurance and Liabilities	208
13	Construction	211
13.1	Work Progress	212
13.1.1	Trades	212
13.1.2	Exercise: Trades	215
13.2	Construction Site Management	216
13.2.1	Site Inspections	216
13.2.2	Site Meetings	216
13.2.3	Exercise: Site Work	217
13.3	Variations	218
13.3.1	Alteration	218
13.3.2	Cause and Effect	219
13.3.3	Exercise: Cause and Effect	220
13.4	Construction Progress	221
13.4.1	Reporting on Progress	221
13.4.2	Exercise: Site Diary	222
13.4.3	Construction Site Accident	222
13.4.4	Ceremonies	224

14	Completion	227
14.1	Completion Stage	228
14.2	Delays	229
14.2.1	Extension of Time	230
14.2.2	Business Collocations	231
14.2.3	Exercise: Business Collocations	232
14.3	Acceptance	233
14.3.1	Acceptance Process	233
14.3.2	Acceptance Certificate	234
14.3.3	Conversation: Acceptance	234
14.3.4	Comprehension Questions: Acceptance	236
14.3.5	Defects Liability Period	236
14.4	Remedial Work	237
14.4.1	Exercise: Remedial Work	238
14.5	Payment Procedures	238
14.5.1	Cost Control	239
14.5.2	Retention	239
14.5.3	Fee Calculation	239
14.5.4	Exercise: Payments	240
14.6	Close-Out	241
14.6.1	Commissioning	241
14.6.2	As-Built Drawings	242
14.6.3	Project Documentation	242
15	In-Use and End of Life	245
15.1	After Completion	246
15.1.1	Building Operation	247
15.1.2	Value Depreciation and Appreciation	248
15.2	Facility Management	249
15.2.1	International Language Differences	249
15.2.2	Intercultural Competence	250
15.3	Upkeep	251
15.3.1	Maintenance	251
15.3.2	Servicing	252
15.3.3	Repairing	252
15.4	End of Service Life	253
15.4.1	Comparing and Contrasting	253
15.4.2	Refurbishment Work	254
15.4.3	Rebound Effect	255
15.5	Demolition	256
15.5.1	Demolition Methods	257
15.5.2	Exercise: Demolition	258
15.5.3	Confusing Words	258
15.6	Reuse and Recycle	259
15.6.1	Selective Deconstruction	260
15.6.2	Waste House	260

16	Education, Registration and More.....	263
16.1	Education	264
16.1.1	Studying	265
16.1.2	Exchange Programmes	266
16.1.3	Internships	266
16.2	Finding Work.....	266
16.2.1	Opportunities	267
16.2.2	Job Advertisement	267
16.3	Job Application	269
16.3.1	Cover Letter	269
16.3.2	Curriculum Vitae	270
16.3.3	Interview	271
16.3.4	Exercise: Interview	271
16.3.5	Outcome.....	272
16.4	Practising as an Architect or Civil Engineer.....	272
16.4.1	Types of Practice.....	273
16.4.2	Registration	273
16.4.3	Working Abroad	274
16.4.4	Self-Appraisal.....	274
	 Supplementary Information	
	Answer Key	278
	Glossary of Keywords	288
	Bibliography	306
	Index	307