The Institution of Engineers, Australia

Engineering Heritage Australia

National Engineering Oral History Program

INTERVIEW TAPE LOG

Interviewee: Sir John Holland Tape Numbers IEA.EHA: SB1,

IEA.EHA: SB2, IEA.EHA: SB3, IEA.EHA: SB4, IEA.EHA: SB5, IEA.EHA: SB6

Interviewer: Stella M Barber Number of Tapes: Six (6)

Dates of Interviews: 9 June 2002 (SB1 & SB2),

11 June 2002 (SB3 & SB4), 21 June 2002 (SB5 & SB6)

Place of Interview: Tapes 1, 2 Sir John's home in Flinders, Victoria

Tapes 3, 4, 5, 6 Navy and Military Club, Little Collins Street,

Melbourne

Restrictions on Use: Subject to proof reading by Sir John or nominee prior to any

publication arising from the use of the recorded material.

385	Flinders Golf Club	Flinders Golf Club
398	Country life	Country
	End of Tape SB1, Side A	

Time	Codelect	Drang- Names 0
Time/ Counter	Subject	Proper Names & Keywords
010	Age 12, yearning to be an engineer	Aspirations
021	Sydney Harbour Bridge	Sydney Harbour Bridge
027	Influence of Shire Engineer	Shire Engineer
035	Desire to be a Civil Engineer	Civil engineer
047	"Meccano", building dams across creek	Meccano
064	Religious background, Presbyterianism	religion
078	Mother's philanthropy	Philanthropy
090	Building local church	Flinders Church
098	Mother's faith	Mother, faith
113	Religious values	
125	Queen's College, Methodist College	Queen's College
146	Anglicanism	Anglicanism
159	Respect of Royalty, respect of the Queen	Royalty
175	School studies, British history, imp of history	British history
187	Love for country, loyalty	Gallipoli
194	Brothers War service, World War II	World War 1
201	Love for Commonwealth	Commonwealth of Australia
204	Joining forces, war effort	World War 11
208	Schooling at Flinders	
214	Flinders State School 841	Flinders State School
226	Composite teaching	Sport
233	Sport education	
236	Discipline at school, corporal punishment	discipline
250	Favourite subjects, curriculum	mathematics
258	Love of reading, macular degeneration	reading
264	Frankston High School reputation and education	Frankston
285	Academic abilities	Work ethic
290	University engineering course, career aspirations	Engineering degree
307	Quality of engineers	Jan Kolm
310	Sporting ambitions	Sport, cricket

330	Playing golf from age 6, hole in one after 73 years	golf
340	Importance of sport, fitness, friendship	
347	Visit of Chancellor of Melbourne University to family home re Holland's education as engineer	Macfarlane University of Melbourne
351	Assessment of university potential, costs of university, decision to send John Holland to Uni of Melbourne	
368	Contingency plans if university not economically viable	
378	Privilege of attending University in the 1930s	University of Melbourne
382	Family pride at his attending University	Tertiary education
385	Family background in engineering	Family engineering traditions
390	Attraction to engineering	Sydney Harbour Bridge
395	First visit to Sydney Harbour Bridge 1934	
	End of Tape SB1, Side B	

	Tape: IEA.EHA: SB2 , Side A	
Time/ Counter	Subject	Proper Names & Keywords
016	Engineers university course Friendship with Dr Bill Bradfield	J.J. Bradfield Dr Bill Bradfield Airport design CAO (international Civil Aviation Organisation)
035	Notable engineers	
046	Experience at University of Melbourne, university procedures	University of Melbourne
065	Professor Kernow; intellect and skills; quality of engineering courses in the 1930s	'Crunch' Kernow, Engineering Qualifications
090	Disappointment re lack of interest in the history of engineering; disappointments with course at Melbourne	B Eng content University of Melbourne course
112	Qualities of good engineers	Engineering discipline
125	Links between engineering and philosophy	
142	Leadership and engineering	Leadership
162	Friendships at University	
174	Benefits of University training	
188	Human and industrial relations	unionism
200	Balance between theory and practise in engineering training	
204	Working with Country Roads Board	Country Roads Board, Road design
214	Using a palimeter	palimeter
220	Early aspirations to build great bridges	Bridge building
230	Challenges of bridge building	Queen Street

236	London Bridge., engineering feats of bridges	London Bridge
241	Emotional aspects of bridge building, linking communities	
256	Contribution to Australia's development, evidence of life's work through civil engineering	Value of engineering
264	Satisfaction in being an engineer	
267	Queen's College, University of Melbourne	Queen's College University of Melbourne
281	Discipline in studying	
285	University of Melbourne Engineering Club activities	University of Melbourne Engineering Club
294	Public Questions Society at University of Melbourne	Public speaking
304	Quality of lecturers at University of Melbourne	Professor Lay check?
330	Assessment procedure of course	assessment
343	Planned extension studies	Masters in engineering courses
363	End of course, thirst for knowledge	
370	Inspirational engineering projects	Eildon Dam
394	Pioneering engineering projects in Australia	Yarrawonga irrigation system, Eric Baldwin
	End of Tape SB2, Side A	

Tape: IEA.EHA: SB2, Side B		
Time/ Counte r	Subject	Proper Names & Keywords
011	Engineering processes, butt welding developed in Australia	Butt welding
022	Story behind first official job with C.O.R. (Commonwealth Oil Refineries)	C.O.R. (Commonwealth Oil Refineries)
027	Influence of Shire Engineer	Shire Engineer
050	Failure of subject at Melbourne University	
070	Interview with Baldwin at C.O.R.	Eric Baldwin
084	Reputation of C.O.R.	C.O.R.
100	Oil pipeline at Laverton for C.O.R.	Laverton
111	Managing field staff	People skills
133	Severing phone supply to Williamstown	Williamstown
154	Project manager, 1938, Hobart Oil Terminal, Hobart Marine Board	Hobart Marine Board
162	Marine engineering experience	Marine engineering
176	Story behind nearly losing his job at C.O.R. due to lack of tact	Brisbane
215	People management skills, leadership	Human resources

241	Saunders and Ward offer to form a company with John Holland, early aspirations to form a company	Saunders and Ward
252	Place of C.O.R. in the history of engineering in Australia	Eric Baldwin, C.O.R.
266	Declaration of war	World War II 1939-1945
273	Engineer cadets	Engineer cadets
290	University engineering course, Career aspirations	Engineering degree
286	Loyalty to Britain and Australia	Empire
290	Threats of chemical warfare	chemical warfare
305	Enlistment	Enlistment
308	School of Military engineering formed by Sir Clive Steele	Sir Clive Steele
313	Training engineer officers	
316	Military engineering, role of engineers in warfare (considerable details here)	Military engineering
328	Shattering feelings as engineers having to destroy engineering feats, bridges etc	
334	Comprehensive role of military engineers	Military engineering
342	Training at the School of Military engineering, nature of the course	
	End Tape SB2, side B	

Tape: IEA.EHA: SB3 , Side A		
Time/ Counter	Subject	Proper Names & Keywords
014	introductions	
017	Commission as Lieutenant, engineering skills aided him in his commission	War service, engineering skills
031	Need for trained military engineers	General Sir Clive Steele
045	Role of engineers in advance in wartime	Engineering Qualifications
055	Using initiative for engineering construction in wartime (note some very good quotes here)	World war II, rationing
066	Building pipelines in Libya	Libya
085	Engineering feats that helped the allies	Engineering feats
095	Destruction of structures prior to the Battle of Bardia	Battle of Bardia
115	Engineering in Z force	Z force
140	Improvisation s engineers in Z force; Sir John's role as Director of technical services in Z force	
145	Speleology	Speleology
164	Fundamental role of engineers in wartime	
167	Japanese and German engineering skills	Japanese and German engineering skills
173	Mines and defusing mines	mines
186	Engineering feats, Colditz etc, general comments	
194	Values of engineering training, analysing problems	engineering training
207	Sir John Monash Scholarships	Sir John Monash Scholarships
227	Appointment to SOE (Z force), security	SOE (Z force)
240	SOA establishment and Sir John's role in it	Special Operations Australia (SOA)
258	Geographical problems faced by SOA, access to remote places	Cairns, Garden Island
256	Contribution to Australia's development, evidence of life's work through civil engineering	Value of engineering
280	Racial and physical personnel problems in wartime	
290	Z force: 81 operations, successes and failures of Z force	Z force operations
300	Problems with covert operations	covert operations
308	Make up of Z force personnel	assessment
330	Interruptions when Sir John says hello to a friend	
335	Soldier first, engineer second in the war	War service
338	Appointment to school of military engineering in Kasula	Kasula
344	State of nation in 1942	1942
357	Training military engineers	

372	Faith in success of allies	victory
375	Americans entry into war	America and war
385	British morale	British character
392	Winston Churchill, Sir John's admiration of Churchill	Winston Churchill
397	End of war	Nagasaki, Hiroshima
	End Tape SB3, Side A	

Tape: IEA.EHA: SB3, Side B			
Time/ Counte	Subject	Proper Names & Keywords	
006	End of the war	Atomic bomb	
028	Moral support re dropping atomic bombs, relief at end of war	VP Day	
054	Skills developed through war service	War service	
065	Managing people	Leadership	
086	Quality of Australian troops		
090	Importance of engineering skills and military skills to later success of Sir John Holland		
095	Personal attributes of Sir Clive Steele	Sir Clive Steele	
116	Support of Colonial Oil Refineries (C.O.R.) during the war for its personnel	Colonial Oil Refineries (C.O.R.)	
126	Return to C.O.R. after the war		
139	Formulation of ambitions while away at war		
145	Fundamentals to establishing his company along military lines with all military personnel	Career aspirations	
155	Parallels between military training and engineering training	military and engineering training	
160	Role of engineers in peace time	Engineers' role in society	
180	Parallels between engineering and military activities	,	
187	Return from the war		
190	Post war experience with C.O.R.	C.O.R.	
200	Satisfaction in engineering projects		
215	Military appreciation study of his life's direction		
242	Options post war	Kuwait	
254	Problems that arose between ex servicemen and non servicemen		
268	Home-front war effort	World war II 1939-1945	
283	Establishment of John Holland Group and its company structure	John Holland Group (JHG)	
297	Training programs at JHG		

305	Registration of JHG, 1949; Stafford Fox, Sir John's partner	Stafford Fox
312	Support of his wife, Joan Holland	Joan Holland
328	JHG growth	JHG
331	Raison d'être of JHG	
338	Personal objectives in forming JHG	Personal objectives
347	Company objectives JHG	Company objectives
359	Fundamental philosophy, doing ordinary things differently	Company philosophy
376	Early projects, woolshed at Nareen for Fraser family	Nareen, Malcom and Tamie Fraser
395	Opening of new Parliament House, Canberra and comments of Frasers	New Parliament House Canberra
	End Tape SB3, side B	

Time/ Counter	Subject	Proper Names & Keywords
014	Nareen woolshed and Parliament House	Tamie Fraser, Parliament House, Canberra, Nareen
023	Engineering practise v administration during his career	
049	Captain Cook Bridge, Sydney	Captain Cook Bridge, Sydney
059	Intuitive feelings as an engineer	
083	Design and engineering skills, nostalgia for these	
066	Building pipelines in Libya	Libya
085	Engineering feats that helped the allies	Engineering feats
098	Feats of engineering	Westgate Bridge
110	Building petrol stations after the war	Service Stations
123	Feats of logistics	
131	Building his first bridge in 1961	Jim Gillespie
166	Most rewarding contracts in the 1950s	Standard cable
173	Association with Austral Standard Cable	Austral Standard Cable
173	Mines and defusing mines	mines
181	Sorrell Bridge first major concrete bridge marine foundations	Sorrell Bridge
194	Awareness of success; success on Snowy Mountains Scheme	Snowy Mountains Scheme
214	Craft of adzing in Bridge building	Adzing
220	Lost techniques in engineering	
234	APM projects	Australian Paper Manufactures

248	Use of tippler in early engineering projects	
255	Union problems on engineering projects	Unionism
270	Early association with Norm Gallagher	Norm Gallagher
281	Associations with union leaders and John Holland	
290	Management/union associations	
300	Union difficulties on engineering projects	Labour relations
302	Deregistration of BLF	Builders Labourers Federation
315	Labour stoppages	
335	Confrontation with unions	
342	Tunnelling skills learned from Scandinavians, skills of Australian workforce	1942
348	Glasshouse Power Station, construction details, unique – all glass cladding	Glasshouse Power Station
358	Skills of riggers	
360	Gas and Fuel contract, cancellation of projects, not seeking compensation	America and war
374	Honesty and integrity at JHG	Company ethos
381	SEC specification, tendering from German specifications, "doing ordinary things differently"	State Electricity Commission
	End Tape SB4, Side A	

Tape: IEA.EHA: SB4, Side B		
Time/ Counte r	Subject	Proper Names & Keywords
012	Profit sharing at JHG	Profit sharing
054	Value of profit sharing	
065	"doing ordinary things differently", State Rivers and Water Supply Commission cooperative effort with JHG	State Rivers and Water Supply Commission, Major General Sir Ken Green
086	Captain Cook Bridge and uniqueness of the project	Captain Cook Bridge, NSW
095	Construction Achievement Award	
106	Bosch project and initiative and originality of the project	Bosch
140	Story of Bosch company and Sir John's association with its founder	
162	Work in Latrobe Valley, association with SEC, John Holland Plantation at Morwell	Yallourn, Morwell, SEC, John Holland Plantation
175	JHG Design team	Loy Yang Power Station
180	World first engineering projects	
200	Westgate Bridge and engineering significance	Westgate Bridge

214	Design skills on Westgate Bridge	
217	Townsville Sugar Terminal 1958, significance of project because first wharf built by JHG	Townsville Sugar Terminal
235	Cyclone risks with Townsville Wharf project	
251	Costing projects and tendering problems	
254	Tendering on projects that ended up being total losses	Yarra Thompson Tunne
278	Problems on Yarra Thompson Tunnel project	
296	Profit and loss on engineering projects	
300	Myer Music Bowl; unique first cable staid structure in Australia	Myer Music Bowl
305	Engineering challenges of Myer Music Bowl	
310	Myer Music Bowl; joint venture with ASCOM	ASCOM
	End Tape SB4, side B	

Tape: IEA.EHA: SB5 , Side A		
Time/ Counter	Subject	Proper Names & Keywords
012	Westgate Bridge Project	Westgate Bridge Project
022	Tendering for contracts, three main contracts	
025	Concrete foundations and spans; discusses winning various contracts	
037	Third contract tendering with Dorman Long	Dorman Long, Sydney Harbour Bridge
043	Foundations in association with consulting engineers – Morgan?	
071	Preparation, design and construction of Westgate Bridge foundation work, ingenuity of design	
082	Launching trusses	Engineering feats
105	JHG taking over of management of original Dutch construction (plenty of detail about this in JHG company history)	Westgate Bridge
130	Sir John's fears at the time about the safety of the bridge, calls for assurances in writing	Safety and Westgate
140	Failure of Westgate Bridge	Collapse Westgate Bridge
143	Redesign of Westgate Bridge, joint venture with Dorman Long	Westgate Bridge Authority, Dorman Long
158	Engineering structures of Westgate Bridge	
162	Royal Commission into collapse of Westgate Bridge	collapse of Westgate Bridge, Royal Commission
177	Sir John's feelings at collapse of the bridge	
187	Loss of JHG people; 35 killed	tragedy
196	Importance of proof engineers	proof engineering
200	Labour problems on bridge	Industrial relations
208	Joint venture with Frankipile, harmonious association	Frankipile
213	Joint venture arrangements, preference for independent projects	Joint ventures
227	Construction Achievement Award for Westgate Bridge for approach spans in 1972	Construction Achievement Award 1972
242	Royal Commission criticism of JHG, frivolous in Sir John's opinion, problems with Royal Commissions	Royal Commission, JH0 culpability
255	Significance of Westgate Bridge in terms of Australian and world engineering achievement and technical achievement	Significance of Westgar Bridge
265	Traffic management and bridges	Traffic management
282	Sydney Harbour Bridge and trams	Sydney Harbour Bridge
288	Animal Research Laboratory, Geelong, background to that commission, design team	Animal Research Laboratory, Geelong
311	Environmental quality of the design	Animal Research

		Laboratory, Geelong, design
320	Working relationship with Government and other contractors during this project, all very harmonious	
330	Significance of this project in Australian and world terms	
345	Harker Construction Achievement Award, named in his honour	Bill Harker
364	John Holland Leadership Award in the army	John Holland Leadership Award
384	Sydney Entertainment Centre, first of its type in Australia	Sydney Entertainment Centre
390	Sydney Entertainment Centre, flexibility of design, multi-functional	
394	Sydney Entertainment Centre industrial problems	Industrial relations
	End Tape SB5, Side A	

Time/ Counte r	Subject	Proper Names & Keywords
005	Sydney Entertainment Centre industrial problems	Industrial relations
020	Premier Neville Wran, supportive of the project	Premier Neville Wran
028	Sydney Entertainment Centre, acoustic and engineering challenges	acoustics and engineering
045	Acoustics issues versus costs	
054	Restaurants and acoustic problems, ideal acoustics for restaurants	restaurants
087	Concert hall and acoustics	Melbourne Concert Hal
104	Architectural skills v engineering skills, blending of these disciplines	Architecture and engineering
123	Great Southern Stand, MCG, relationship between architect and engineers	MCG, Great Southern Stand
134	Sydney Opera House, design and problems with interpretation of design	Sydney Opera House, Utzen
148	Hornibrook and engineers on Sydney Opera House, interpreting Utzen's concepts so it could be built	Hornibrook
160	Inflated cost of Sydney Opera House	Sydney Opera House, costs involved
180	Engineers and architectural training	architectural training for engineering
192	South Eastern Freeway, first major freeway in Australia in 1961	South Eastern Freeway
210	Steel spans used in freeway design	
215	Pre-stressed concrete projects	Pre-stressed concrete
223	Road building	Road building
228	Technology of road construction	

236	Traffic management in building roads	Traffic management
247	Great southern stand MCG	Great southern stand MCG
255	Darryl Jackson's design of Great southern stand MCG	Darryl Jackson
259	Co-operation between parties involved in the project	
270	Major concrete structure: functional, economical and readily constructible	Qualities of the Great Southern Stand MCG
276	MCG redevelopment, current projects	MCG
287	New Parliament House Canberra	New Parliament House Canberra
291	Budget and flexibility in creating engineering feats	
296	Challenges of New Parliament House Canberra, logistics, time, changes in design, quality of materials	New Parliament House Canberra, quality assurance on project
305	Materials from Australia-wide, numbers of people working on the project	
310	Joint venture with Concrete Constructions, Sydney	Concrete Constructions Sydney
320	Time challenges on project	
328	Stone masons from Portugal working on the project, industrial relations problems	Industrial relations
334	Erection of stainless steel flagpole, Parliament house	flagpole, Parliament house
344	Cost of project, \$1 million per day at end of project	costs
364	Design competition for the project	
370	Opening of new Parliament House	New Parliament House Canberra
380	Sir john's pride in working on the New Parliament House, its grandeur	
391	Fast track system design and construction	Fast track system
	End Tape SB5, side B	

Time/ Counter	Subject	Proper Names & Keywords
006	Introductions	Reywords
010	Fast track system of design and construction	Fast track system of design and construction
020	Union stoppages at New Parliament House	New Parliament House
038	Beauty of New Parliament House and quality of finish	Industrial relations
053	Problems with budget restrictions in building great buildings and lack of natural will	Federation Square Melbourne
065	Church architecture	Architecture
073	Architecture in Australia	St Paul's Cathedral, Melbourne

Tape: IEA.EHA: SB6, Side B		
Time/ Counte r	Subject	Proper Names & Keywords
005	University education, costs, fees etc, scholarships and	University education

class)

End Tape SB6. Side A

	fees		
025	Sir John's greatest achievements, setting up JHG	Greatest achievements, John Holland Group	
047	Fondest recollections of his life, family life, cricket, cricket tour of the U.K. 1961, playing cricket	Family, cricket	
078	Centenary celebrations at Royal Melbourne Golf Club (Sir John was president at the time)	Royal Melbourne Golf Club	
094	Mediterranean cruises	Royal Viking Star	
117	Less than fond memories, bleakest moments in his life	Collapse of Westgate Bridge	
126	War service in Greece, memories of refugees and destruction	World War II, Greece	
138	Queues for food during Great Depression	Great Depression	
149	Demise of JHG, story behind the change in ownership of the company	Demise of JHG, Pennan Group	
171	Takeover of JHG by Pennant Group, sale by Stafford Fox of his shares, 1989 crash and affect on JHG, involvement of Johnson	Pennant Group, Stafford Fox, Johnson	
200	Janet Holmes a Court takes control of JHG in 1990	Janet Holmes a Court	
205	Sir John's retirement from JHG	retirement	
208	Sir John's sons' involvement in JHG	Jock Holland	
226	Sale of engineering division		
228	Holland House, JHG HQ	Holland House	
232	Confidence in future of JHG	future	
235	Overseas expansion of JHG, 1972	Overseas expansion	
241	Expansion into Indonesia and elsewhere in Asia	Indonesia	
257	Corruption in Indonesia		
264	JHG in Malaysia	Malaysia	
285	Indonesian Projects	Indonesia	
294	JHG's expansion into America, problems, American construction opportunities, problems with getting USA market share	America	
307	Beaurocracy problems in USA, losing money in USA	Beaurocracy	
321	JHG experiences in California, success in Atlanta, transit system	California, Atlanta	
333	Engineers training, value of engineering skills to business	Engineers training and skills	
351	Management consulting		
356	Engineering and education in school curriculum	Engineering and school curriculum	
372	Engineering profession and general understanding of engineers and what they do, engineers contribution to modern society	Role of engineers in society	
393	"Thank you"s		
	End Tape SB6, side B. End of Interviews		