PROPERTY ECONOMICS

WELLINGTON FEASIBLE CAPACITY ASSESSMENT MEMORANDUM

Client:	Wellington City Council
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MEMORANDUM

To: Joshua Patterson
Principal Planner
Wellington City Council

RE: WELLINGTON CITY FEASIBLE AND REALISABLE CAPACITY RESULTS SCENARIO 2

Hi Josh

Earlier this year, the Wellington Regional Leadership Committee (WRLC) engaged Property Economics to provide capacity modelling for five districts in the Wellington Region for the Housing and Business Capacity Assessment. Prior to this, Property Economics was engaged individually by Wellington City Council to undertake an assessment of the qualifying matter impacts in relation to their respective plan changes to implement the NPS-UD-directed intensification planning standards.

The WRLC is currently in the process of preparing the Housing and Business Capacity assessment for the Wellington Region and as part of this process, it was identified that there were a number of variations in the way Wellington City had been modelled. Consequently, Property Economics has been requested by Council to make adjustments to the assumptions in the Wellington capacity assessment to align the modelling with those undertaken elsewhere in the region. Specifically, this includes:

- changes to the commercial ratios
- dwelling sizes
- the treatment of Restricted Discretionary Activities in relation to the Coastal Hazard QFM in the City Centre.

This memorandum outlines the changes to the model and provides updated tables displaying the results of this modelling. For clarity the following tables and numbers are based on the market variables established as Scenario 2 in Property Economics original Qualifying Matter (QFM) report.

COMMERCIAL LAND-ADJUSTED CAPACITY

Although the capacity results above reflect the district plan outcomes for residential capacity in the Commercial Zones (i.e., limiting apartments to only be located above the ground floor where retail frontages are required), further adjustments were made to account for other competing activities.

The proportions used for this Commercial and Residential Split were provided by the Council and were based on analysis undertaken in preparation for the 2019 HBA. The proportions used were as follows:

- Metropolitan Centre Zone: 80% Commercial and 20% Residential

- Mixed Urban Zone: 60% Commercial and 40% Residential
- Central City Zone (Wellington Central): 90% Commercial and 10% Residential
- Central City Zone (Te Aro): 70% Commercial and 30% Residential
- Local Centre Zone: 70% Commercial and 30% Residential
- Neighbourhood Centre Zone: 70% Commercial and 30% Residential.

Following the capacity assessment for Wellington City Council, Property Economics was also engaged to undertake capacity assessment for Let's Get Wellington Moving (LGWM). This was an assessment focused on capacity along the proposed Rapid Transport Corridor between Island Bay and the City Centre. The LGWM team asked Property Economics to use updated commercial ratios based on recent trends in commercial activity along their corridor. For the HBA capacity results, WCC has requested that we use these commercial proportions.

The Commercial and Residential Splits applied in the LGWM model were focused on a suburb level and are as follows:

- Thorndon between the motorway and the port: 50% residential, 45% commercial, 5% retail (ground floor)
- City Centre: 60% residential, 35% commercial/office, 5% retail
- Te Aro: 75% residential, 20% commercial/office, 10% retail
- Mt Victoria: 98% residential, 2% business/retail
- Mt Cook: 80% residential, 15% commercial/office, 5% retail

The ratios used in commercial zones elsewhere remain the same as the ratios in the previous model.

It is important to note that most realisable apartments are in the commercial zones, namely the City Centre Zone. Therefore, the total assessed capacity for apartments is highly sensitive to these commercial-to-residential ratios.

Realistically, the proportion of commercial development capacity utilised for residential purposes will be highly dependent on the relative supply and demand of commercial and residential activities. Essentially, if the demand for apartments outstrips the demand for commercial and retail, it is likely that the residential proportion of development in commercial zones will exceed the proportions identified above, resulting in more apartment capacity delivered. Conversely, the opposite would be true if the density enabled by the Proposed District Plan provides for an excess of higher-density dwellings in the residential zone such that demand for residential apartments in the City Centre is reduced.

DWELLING SIZES

Table 1 following shows a comparison of the dwelling sizes used in the Wellington City modelling and those used in the other districts. This shows that the dwelling sizes used by the Regional Capacity Model for the Terraced and Apartments were smaller on average compared to those used in the Wellington Model.

In order to achieve a level of consistency between the districts for purposes of comparison, the dwelling sizes in Wellington City have been reduced to match those used in the Regional Capacity Model.

TABLE 1: DWELLING SIZE COMPARISON (SQM)

Typology	Wellington		Regional Capacity Model
	Minimum	Maximum	
Small Houses	84	105	100
Medium Houses	120	150	150
Large Houses	180	225	220
Small Terraced	84	105	75
Medium Terraced	120	150	100
Large Terraced	180	225	130
Small Apartments	84	105	50
Medium Apartments	120	150	70
Large Apartments	180	200	90

Source: Property Economics

RESTRICTED DISCRETIONARY ACTIVITY – COASTAL HAZARDS IN THE CITY CENTRE ZONE

The original theoretical modelling parameters for assessing the capacity of Wellington City under the Qualifying Matters as designed by Urban Edge and Council was as a permitted or controlled baseline, removing any capacity that would be classified as Restricted Discretionary or above[1]. This included removing any capacity in the Flood or Coastal Hazard Zones except the Low Coastal Hazard which permitted up to three dwellings on a site.

However, Property Economics' draft report to WCC showed the capacity impacts of the Hazard QFM with all capacity removed in the Ponding Flood Hazard and a separate scenario with the Ponding capacity included, subject to additional mitigation costs and a reduced realisation rate to account for the additional risks associated with applying for a Restricted Discretionary Consent. This latter scenario is the approach the Council decided to adopt.

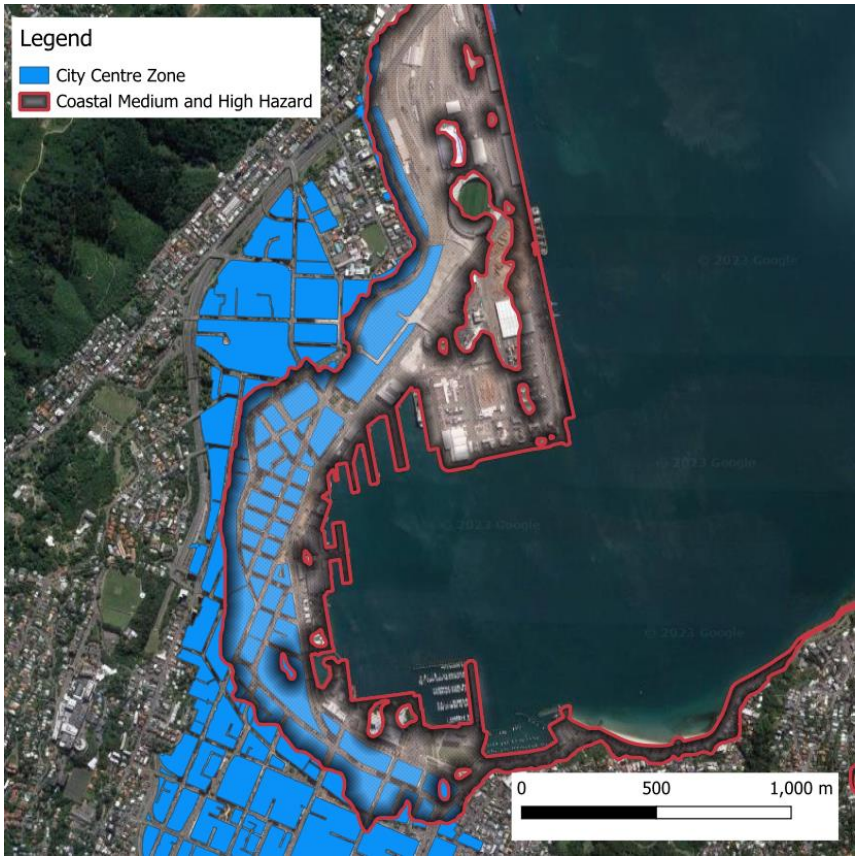
In the more recent assessment of the capacity for the other districts, Restricted Discretionary Activities have been included with mitigation costs and reduced realisation rates as the baseline. Consequently, for the purposes of the Housing and Business Capacity Assessment, it was decided to

[1] *With the exception of allowing for multi-unit apartment developments over three dwellings per site where they were anticipated. Specifically, under Rule HRZ-R14, six-storey apartments would be an RD activity however this activity is enabled and anticipated for the High-Density Residential Zone and therefore was included.*

include the sites that lie within the Medium and High Coastal Hazards in the City Centre which are Restricted Discretionary Activities.

Figure 1 shows the extent of the Medium and High Coastal Hazards that affect the Wellington City Centre Zone.

FIGURE 1: COASTAL HAZARDS IN THE CITY CENTRE ZONE



Source: Property Economics, WCC

FEASIBLE AND REALISABLE CAPACITY RESULTS

Table 2 shows the Feasible and Realisable Capacity results with the updated modelling assumptions as described above. This includes the changes to the commercial ratios, dwelling sizes and Coastal Hazard QFM and is based on the market Scenario 2 of reduced price point and higher construction costs. It should also be noted that in previous assessments the Commercial Adjustments were separated out in the tables. This is not the case in the following tables with these numbers reflecting the final numbers.

Table 2 shows that the Feasible Capacity is just over 95,000 with the Realisable Capacity totals 68,784. There is a significant decrease between the level of capacity that is feasible versus the realisable capacity, particularly in the City Centre. This is driven by both the lower realisation rate of apartments and the RD activity status within the coastal hazard area.

TABLE 2: FEASIBLE AND REALISABLE CAPACITY WITH UPDATED ASSUMPTIONS

Feasible (Max Profit)	Theoretical	Apartment	Standalone	Terraced	Total	% of Theoretical
Residential Zones	227,982	3,261	13,011	45,695	61,967	27%
Commercial Zones	66,941	33,034	0	0	33,034	49%
Total	**294,923**	**36,295**	**13,011**	**45,695**	**95,001**	**32%**
Realisable	**Theoretical**	**Apartment**	**Standalone**	**Terraced**	**Total**	**% of Theoretical**
Residential Zones	227,982	929	15,772	32,329	49,030	22%
Commercial Zones	66,941	20,385	0	0	20,385	30%
Total	**294,923**	**21,314**	**15,772**	**32,329**	**69,415**	**24%**

Source: Property Economics, WCC

Table 3 shows that the Realisable Capacity is sufficient to meet the demand over the short, medium and long term. That is, the Realisable Capacity of 69,415 is more than double the expected demand of 30,407 dwellings.

TABLE 3: RESIDENTIAL DEVELOPMENT CAPACITY SUFFICIENCY FOR WELLINGTON CITY 2021-2051

Residential development capacity sufficiency for Wellington City, 2021 - 2051				
	2021-2024	2024-2031	2031-2051	TOTAL
Demand	3,523	7,814	19,070	30,407
Realisable Capacity	69,415			
Remaining Capacity	65,892	58,078	39,008	39,008
Sufficiency	TRUE	TRUE	TRUE	TRUE

Source: Property Economics, WCC

Table 4 and Table 5 outline the Residential Development Capacity by Suburb.

TABLE 4: FEASIBLE CAPACITY BY SUBURB

Feasible Capacity						
Suburbs	**Theoretical Capacity**	**Feasible Standalone**	**Feasible Terraced**	**Feasible Apartment**	**Total Feasible Capacity**	**Feasibility Rate**
Aro Valley	2,114	198	127	150	475	22%
Berhampore	1,291	9	324	195	528	41%
Broadmeadows	2,406	157	8	-	165	7%
Brooklyn	9,346	981	2,038	6	3,025	32%
Churton Park	10,727	395	102	-	497	5%
Crofton Downs	3,929	217	1,054	-	1,271	32%
Glenside	584	131	-	-	131	22%
Grenada North	429	2	16	-	18	4%
Grenada Village	3,311	337	15	-	352	11%
Hataitai	4,656	4	1,893	-	1,897	41%
Highbury	505	12	115	-	127	25%
Houghton Bay	1,560	237	299	-	536	34%
Island Bay	10,473	811	2,462	21	3,294	31%
Johnsonville	17,907	1,217	1,403	162	2,782	16%
Kaiwharawhara	1,214	9	371	201	581	48%
Karaka Bays	1,665	166	1,016	-	1,182	71%
Karori	22,833	645	9,761	-	10,406	46%
Kelburn	3,851	14	1,631	-	1,645	43%
Khandallah	16,393	332	7,092	336	7,760	47%
Kilbirnie	1,798	49	318	15	382	21%
Kingston	2,212	348	94	-	442	20%
Lyall Bay	1,235	138	214	-	352	28%
Maupuia	794	-	254	-	254	32%
Melrose	1,881	233	412	-	645	34%
Miramar	8,368	375	1,081	146	1,602	19%
Moa Point	214	54	112	-	166	78%
Mornington	1,685	322	31	-	353	21%
Mount Cook	9,281	-	238	4,737	4,975	54%
Mount Victoria	4,260	-	419	1,582	2,001	47%
Newlands	12,191	962	102	7	1,071	9%
Newtown	4,241	149	722	575	1,446	34%
Ngaio	10,307	456	3,075	-	3,531	34%
Ngauranga	402	44	49	30	123	31%
Northland	3,809	156	1,012	6	1,174	31%
Oriental Bay	299	-	236	-	236	79%
Owhiro Bay	1,536	340	40	-	380	25%
Paparangi	4,443	461	30	17	508	11%
Pipitea	3,824	-	-	1,813	1,813	47%
Rongotai	506	4	-	-	4	1%
Roseneath	1,540	9	869	8	886	58%
Seatoun	2,938	162	1,879	-	2,041	69%
Southgate	1,743	178	325	-	503	29%
Strathmore Park	4,415	496	586	6	1,088	25%
Takapu Valley	40	-	-	-	-	0%
Tawa	30,510	1,195	65	-	1,260	4%
Te Aro	28,243	-	54	13,322	13,376	47%
Thorndon	8,430	7	130	3,447	3,584	43%
Vogeltown	1,205	146	143	-	289	24%
Wadestown	5,790	100	3,148	-	3,248	56%
Wellington Central	15,702	-	13	9,514	9,527	61%
Wilton	2,972	256	303	-	559	19%
Woodridge	2,914	497	14	-	511	18%
Total	**294,923**	**13,011**	**45,695**	**36,295**	**95,001**	**32%**

TABLE 5: REALISABLE CAPACITY BY SUBURB

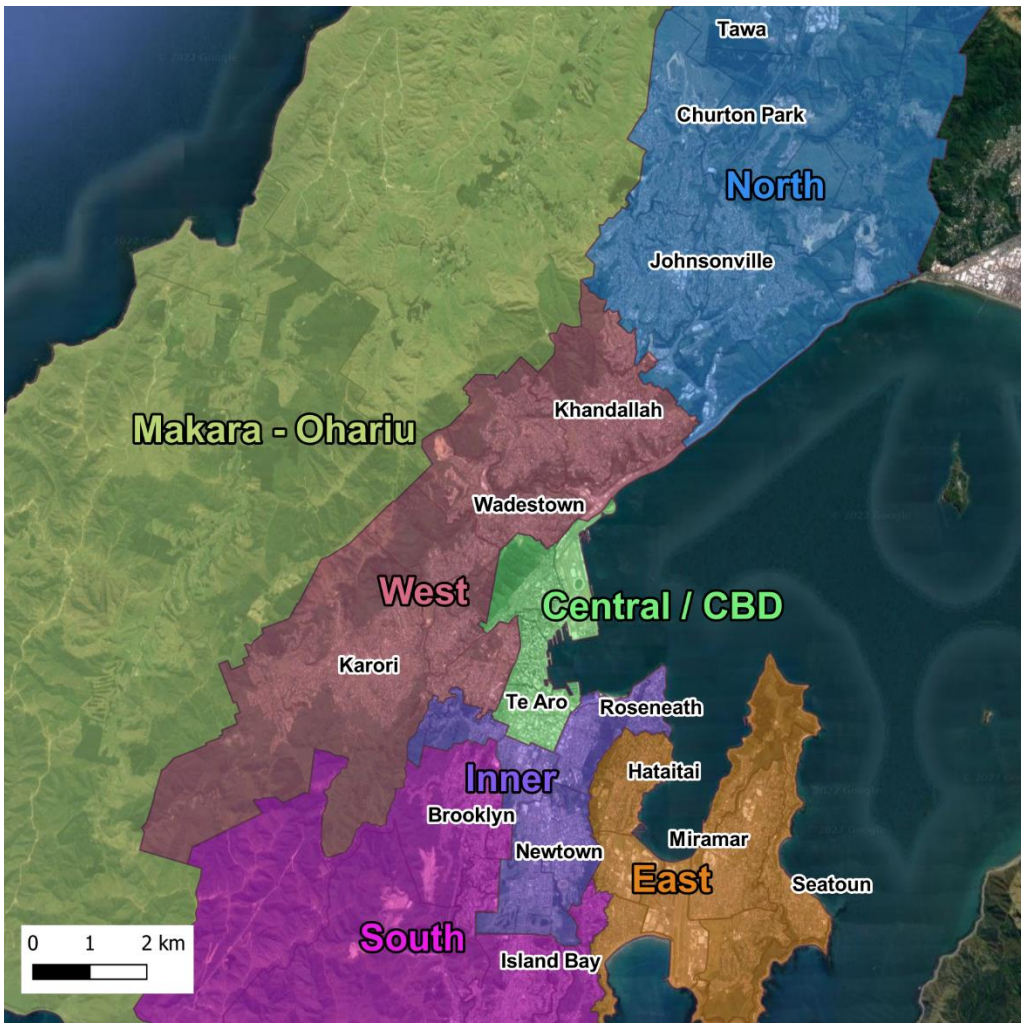
Realisable Capacity						
Suburbs	**Theoretical Capacity**	**Realisable Standalone**	**Realisable Terraced**	**Realisable Apartment**	**Total Realisable Capacity**	**Feasibility Rate**
Aro Valley	2,114	205	75	51	331	16%
Berhampore	1,291	28	212	161	401	31%
Broadmeadows	2,406	132	-	-	132	5%
Brooklyn	9,346	1,113	1,402	6	2,521	27%
Churton Park	10,727	339	7	-	346	3%
Crofton Downs	3,929	338	766	-	1,104	28%
Glenside	584	107	-	-	107	18%
Grenada North	429	14	-	-	14	3%
Grenada Village	3,311	290	-	-	290	9%
Hataitai	4,656	7	1,606	-	1,613	35%
Highbury	505	20	64	-	84	17%
Houghton Bay	1,560	295	126	-	421	27%
Island Bay	10,473	1,230	854	-	2,084	20%
Johnsonville	17,907	1,431	339	23	1,793	10%
Kaiwharawhara	1,214	90	216	-	306	25%
Karaka Bays	1,665	271	846	-	1,117	67%
Karori	22,833	1,125	7,330	-	8,455	37%
Kelburn	3,851	23	1,448	-	1,471	38%
Khandallah	16,393	1,031	5,663	83	6,777	41%
Kilbirnie	1,798	86	196	-	282	16%
Kingston	2,212	356	-	-	356	16%
Lyall Bay	1,235	168	115	-	283	23%
Maupuia	794	-	203	-	203	26%
Melrose	1,881	325	174	-	499	27%
Miramar	8,368	449	475	4	928	11%
Moa Point	214	96	38	-	134	63%
Mornington	1,685	316	9	-	325	19%
Mount Cook	9,281	4	192	4,680	4,876	53%
Mount Victoria	4,260	-	402	952	1,354	32%
Newlands	12,191	833	2	-	835	7%
Newtown	4,241	201	605	64	870	21%
Ngaio	10,307	712	2,243	-	2,955	29%
Ngauranga	402	72	11	-	83	21%
Northland	3,809	239	660	3	902	24%
Oriental Bay	299	4	228	-	232	78%
Owhiro Bay	1,536	329	7	-	336	22%
Paparangi	4,443	458	-	-	458	10%
Pipitea	3,824	-	-	750	750	20%
Rongotai	506	-	-	-	-	0%
Roseneath	1,540	71	742	-	813	53%
Seatoun	2,938	185	1,762	-	1,947	66%
Southgate	1,743	247	144	-	391	22%
Strathmore Park	4,415	561	197	-	758	17%
Takapu Valley	40	-	-	-	-	0%
Tawa	30,510	734	-	-	734	2%
Te Aro	28,243	-	39	8,696	8,735	31%
Thorndon	8,430	7	120	1,459	1,586	19%
Vogeltown	1,205	166	49	-	215	18%
Wadestown	5,790	235	2,694	-	2,929	51%
Wellington Central	15,702	-	13	4,382	4,395	28%
Wilton	2,972	320	55	-	375	13%
Woodridge	2,914	509	-	-	509	17%
Total	**294,923**	**15,772**	**32,329**	**21,314**	**69,415**	**24%**

SUFFICIENCY BY LOCATION

The above capacity estimates show the potential dwelling yield based on the assumption of developers maximising their profits relative to the risk. However, it is important to also consider the level of demand for these dwellings from both a locational and typology perspective.

Figure 2 shows the residential catchment areas utilised in the Housing and Business Capacity Assessment for a finer-grain locational analysis.

FIGURE 2: MAP OF WELLINGTON CITY RESIDENTIAL CATCHMENTS



Source: Property Economics, LINZ

Based on these catchments, Property Economics then compared the modelled capacity to the demand as projected by Sense Partners. This is broken down into dwelling size, typology and location (catchment).

The model reconciles the realisable capacity against this demand by sorting each of the sites by profit and systematically allocating each of them to be "realised" as one of the nine typologies / sizes. The resulting capacity results are therefore a reflection of both the profitability of development and the market demand.

Table 6 shows the Demand Reconciled capacity by typology, showing that there is sufficient capacity to meet the projected demand for both Standalone and Attached. However, the capacity for Attached Dwellings is more than three times the demand while the Standalone Capacity only exceeds the demand by 28%.

TABLE 6: DEMAND RECONCILIATION UNDER THE SENSE PARTNERS MEDIUM PROJECTION BY TYPOLOGY

Sufficiency by typology				
	Demand	Capacity	Balance	Sufficiency
Attached	15,665	55,445	39,780	TRUE
Standalone	14,742	18,953	4,211	TRUE
Total	30,407	74,398	43,991	TRUE

Source: Property Economic, WCC

The total capacity of the Demand Reconciliation Capacity is slightly higher than the Realisable Capacity at 74,398 compared to 69,415. This reflects a change in the distribution of typology and size. In particular, there is a large shift in the Central Quadrant from large apartments as being the most profitable to a mix of sizes that favoured small-medium apartments, thereby resulting in a significant increase in capacity.

In a more affordable market, households may have been able to afford these larger homes. However, the reality is that many homeowners are having to choose smaller dwellings than their predecessors due to the rising cost of housing relative to income making them unaffordable.

Table 7 shows the capacity by residential quadrant. Note that the Makara – Ohariu catchment has no urban capacity in this assessment, and it does not include greenfield capacity. has not been included as it has no urban capacity.

TABLE 7: DEMAND RECONCILIATION UNDER THE SENSE PARTNERS MEDIUM PROJECTION BY RESIDENTIAL CATCHMENTS

Sufficency by location				
	Demand	Capacity	Balance	Sufficiency
North	9,582	5,308	-4,274	FALSE
Central	6,370	25,740	19,370	TRUE
Inner	2,960	8,407	5,447	TRUE
Southern	2,664	6,756	4,092	TRUE
Western	5,028	21,853	16,825	TRUE
Eastern	3,672	6,334	2,662	TRUE
Makara-Ohariu	131		-131	FALSE
Total	30,407	74,398	43,991	TRUE

Source: Property Economics, WCC

Table 7 highlights that all catchments except for the Northern Catchment have sufficient capacity. The underlying reason for undersupply in the northern capacity compared to demand is not

necessarily representative of an undersupply of enabled capacity, but a result of the lower feasibility rate of intensification. This is driven by the difference in land values, with properties closer to the City Centre typically being more valuable and therefore feasible to subdivide.

Additionally, the demand attributed to these Northern Suburbs is significantly higher than in the other areas. With the level of intensification that is enabled across the city by the PDP, it is not unrealistic to expect that a redistribution of this growth is possible with the Western Suburbs having more than sufficient capacity to support this potential undersupply.

Table 8 shows the Realisable Capacity by Residential Catchment and the percentage of the total Theoretical Capacity that is realisable.

TABLE 8: REALISABLE CAPACITY BY CATCHMENT

Housing area	Realisable capacity	
	Total	% of theoretical capacity
North Wellington	5,169	6%
West Wellington	25,406	35%
Wellington Central/CBD	15,466	28%
Inner Wellington	8,961	38%
South Wellington	7,148	23%
East Wellington	7,265	27%
Makara-Ohariu		

Source: Property Economics, WCC

If you have any queries, please give me a call.

Kind Regards

Tim Heath / Phil Osborne