Author gives express permission to publish the entire contents of this submission including name and email address. Author has read editorial guidelines.

Submission to Defence White Paper 2015

Force Structure and Preparedness

Executive Summary

Force structure and preparedness:

Force structure and preparedness is far below the required minimum for fighting a high level war such as a 1950's Korean type war over an extended period or two (2) concurrent wars:

Force structure and preparedness is far below the required minimum for fighting both a high level war 1950's Korean type war or two (2) concurrent wars.

Army under PLAN BEERSHEBA and ARMY OBJECTIVE FORCE 2030 is severely deficient in both manpower and steel hulled vehicles of many types. Army requires four (4) full time, multi-role combat brigades plus two (2) Ready Reserve multi-role combat brigades plus ten thousand (10,000) ordinary Army Reservists plus nine hundred (900) tracked, steel hulled vehicles of many subtypes under LAND 400; two thousand (2,000) more new Bushmasters; one thousand, three hundred (1,300) Hawkei and upgraded M113AS4's. ASLAV's should be replaced by only Bushmasters firing a 25mm cannon on a remote control weapon system or other weapons.

Navy is severely deficient in new technology (A.I.P.) submarines; refuelling and replenishment ships and Hobart class warships. Navy requires (a) six (6) new Type 214 (A.I.P.) German made submarines; (b) three new 25,000 tonne refuelling ships; (c ) three new 25,000 tonne replenishment ships; (d) fourteen (14) new surface warships, similar in capabilities to the Hobart class to replace both Anzac and Adelaide classes and to add to total warship numbers to protect Navy's three new amphibious ships and (e) thirty-six (36) new Sikorsky MH-60R helicopters.


R.A.A.F. requires (a) seven more KC-30A aerial tankers; (b) eighteen more FA-18F/EA-18G Hornets to replace the obsolete “A” model Hornet and to avoid the strategic gap caused by the severe delay in F-35A Joint Strike Fighter coming into full combat service around 2023; caused by extreme delays in both software and electronics testing; (c ) fourteen NASAMS surface to air missile systems; (d) twenty-four Predator B attack-ISTAR capable unmanned aircraft; (A.D.F.-Customs joint use); (e) twelve Hermes 900 unmanned aircraft and (f) thirty-six jet engined, stealthy, Predator C attack-ISTAR capable unmanned aircraft; (A.D.F.-Customs joint use).

END OF EXECUTIVE SUMMARY
R.A.A.F.

RECOMMENDATIONS TO BUILD A STRONG AUSTRALIAN AIR FORCE AT MINIMUM COST:

R.A.A.F. - Predator C:

Predator C allows a reduction in purchase of F-35A joint strike fighters to a maximum of forty-eight (48) instead of current 72 F-35A's because its stealth, high speed, long range, internal bombload and jet engine allows it to take over many of the F-35A's tasks. Pays for itself because mission planners can substantially reduce the use of manned aircraft of many types.

Predator C creates a new, high technology, low cost paradigm in the way to fight war because of its low cost, stealth, speed, logistics, useful bomb-missile load; operates around 24 hours per sortie and is stored away when not required.

Employ R.A.A.F. reservists to pilot and maintain most Predator aircraft to provide a low cost way to have a surge capability. Low cost to train with simulators. Maintenance is easy.

AP3C Orions:

Keep eighteen AP3C Orions operational to 2030. Critical to providing long range ISTAR-attack-maritime surveillance capabilities.

F-35A - Joint Strike Fighter - many critical problems:

F-35A has suffered from severe deficiencies such as writing-testing its ten million line software and meshing its radars, IRST, communications, missiles and bombs. R.A.A.F. has to write millions of more software to allow F-35A to communicate with Wedgetail, Hornets, P8A, warships and soldiers and therefore 100 per cent F-35A combat capability to start around 2025.

F-35A - severe performance deficiencies:

F-35A has NO supersonic capability; carries only four AMRAAM internally; has tortoiselike transonic acceleration; NO rearward radar; NO left-right side lobe radars; NO long range infra-red air to air missile and NO Meteor air to air missile which combines to make F-35A an easy target for a skilled Su-35 pilot.

Surface to air missiles:

SAMS such as Raytheon's NASAMS firing ESSM have been wrongly ignored for decades. Purchase fourteen (14) NASAMS systems to protect A.D.F. in combat; protect A.D.F. bases in Northern Australia and Australian capital cities.
NAVY

RECOMMENDATIONS TO BUILD A STRONG NAVY AT MINIMUM COST:

**Recommendation One:** - purchase three new, 25 knot replenishment ships (similar to H.M.A.S. Success) plus three new, fast, 25 knot refuelling tankers; (similar to H.M.A.S. Sirius) all of 25,000 tonnes.

Purchase of two new replenishment/refuelling ships; (announced June 2014) is a strategic planning error because Navy's three new amphibious ships; their helicopters and vehicles plus Anzacs and Adelaide warships consume huge quantities of fuel and spares. Therefore, amphibious landing(s) and convoy work will be choked because Navy will have only two replenishment-refuelling ships instead of a minimum of six.

**Recommendation Two:** - purchase thirty-six Sikorsky MH-60R helicopters because Navy's three amphibious ships plus Adelaide and Anzac warships all concurrently require MH-60R helicopters.

**Recommendation Three:** - build fourteen new warships under SEA 5000 project with a similar capability to Hobart class from 2015 to 2029. If costs move well above inflation and productivity keeps low at Australian shipyards; then Navantia should be given contracts to build more modules or whole SEA 5000 warships.

**Recommendation Four:** - fit 8 Anzac class with RAM Block Two and 4 Adelaide class; each with two boxes of SEARAM;

**Recommendation Five:** - fit Anzac class; Adelaide class; three amphibious ships and Hobart class with U.S. Navy Co-operative Engagement Capability plus electronic countermeasures to confuse infrared-radar guidance on incoming ballistic missiles;

**Recommendation Six:** - fit each of the three amphibious ships with two boxes of SEARAM; two Phalanx 1B, Nulka; CEA phased array radar plus box of thirty-two ESSM missiles (as fitted to H.M.A.S. Perth).

**Recommendation Seven:** - Purchase six German Type 214 submarines. Base at Christmas-Cocos Islands and Guam;

**Recommendation Eight:** - CANCEL SEA 1180. Save upwards of $4 Billion. Replace current patrol, hydrographic and survey ships with similar ships as they wear out.
Army

Recommendations to build a strong, sophisticated, 21st century Army, capable of successfully fighting in a high level intense war similar to the Korean War of the 1950's over twelve months or fighting two (2) concurrent wars over twelve months and to easily achieve LAND 400, PLAN BEERSHEBA and ARMY OBJECTIVE FORCE 2030 at minimum cost with minimum implementation problems:

Army under LAND 400, PLAN BEERSHEBA and ARMY OBJECTIVE FORCE 2030 is critically deficient in both manpower and steel hulled vehicles of many types which are both tracked and wheeled.

To fix Army's manpower deficiencies: Army under PLAN BEERSHEBA and ARMY OBJECTIVE FORCE 2030 requires the establishment of the following: (a) a new, fourth, (4th) full time, multi-role combat brigade; (b) two (2) new High Ready Reserve multi-role combat brigades plus (c) maintain a minimum of ten thousand (10,000) ordinary Reservists. (d) All soldiers are fully equipped with weapons and vehicles and are fully trained (as far as is practical with ordinary part-time reservists).

To fix Army's equipment deficiencies: Army under LAND 400, PLAN BEERSHEBA and ARMY OBJECTIVE FORCE 2030 requires (a) nine hundred (900) steel tracked, steel hulled vehicles (such as battle proven, digitized, networked B. Ae. Systems CV-90 and its many subtypes); (b) two thousand (2,000) more new Bushmasters (divided equally between full time and Reserve units); (c) one thousand, three hundred (1,300) Hawkeis; (d) five hundred (500) units of 120mm mortars; (e) twenty-four (24) attack-ISTAR capable Predator B; (f) thirty-six (36) jet engined, stealthy, Predator C (joint A.D.F.-Customs use for both Predator types); (g) thirty (30) trucks carrying HIMARS long range rocket systems; (h) twenty-four (24) new F model Chinooks and (i) fourteen (14) NASAMS surface to air missile systems to protect A.D.F. in combat overseas; A.D.F. bases in Northern Australia and Australian capital cities and.

Army planners have built an Army which fails in war:

Army planners do NOT realize that under PLAN BEERSHEBA and ARMY OBJECTIVE FORCE 2030 they have built an Army which fails in war IF Army is required to fight two (2) wars concurrently over twelve months or to fight one intense high level 1950's Korean War over twelve months.

Solution:

Army must be capable of sending to war at any time; a minimum of two (2) fully trained and fully equipped multi-role combat brigades which are backed up by two (2) Army HIGH READY RESERVE multi-role combat brigades plus ten thousand (10,000) Army Reservists. All are fully equipped and fully trained (as far as practical with part time reservists). NOT in current Army planning.
LAND 400-equipment deficiencies in Army:

Under LAND 400, Army requires steel hulled, steel tracked vehicles such as (a) three hundred and twenty-five (325) C.R.V.'s; (b) three hundred and twenty-five (325) I.F.V.'s; (c) one hundred and fifty (150) subtypes (recovery, repair, command) (d) fifty (50) tanks firing a 105mm -120mm gun and (e) fifty (50) M.S.V.'s.

B. Ae. Systems CV-90 is the only battle proven, digitized, networked, steel hulled, steel tracked vehicle built in the Western world and is capable of successfully fighting in an intense 1950's Korean War over twelve months or fighting concurrent (2) wars over twelve months. B. Ae. Systems Terrier M.S.V. is a proven, digitized, networked 21st century M.S.V. Both are ideal for Army and achieve LAND 400 requirements.

Mobile 120mm mortar fixed to floor of G Wagons, Bushmasters, M113AS4's and Hawkei's:

Purchase five hundred (500) new 120mm mortars and fit a minimum of two hundred and fifty (250) new design Soltam Spear with its low recoil allowing it to be fitted to internal floors of G Wagons, Bushmasters, M113AS4's and Hawkei's. More powerful, highly mobile mortar for a fire power deficient Army. Subject to Army - O.S.T.O. trials

Direct fire rockets fired from roof of G Wagons, Bushmasters, M113AS4's and Hawkei's:

Purchase three hundred (300) direct fire long range SPIKE ER or HELLFIRE "R" and fire from roof of G Wagons, Bushmasters, M113AS4's and Hawkei's or from a tripod away from vehicle. More powerful rocket for a fire power deficient Army. Subject to Army and O.S.T.O. trials

HIMARS long range rockets:

Purchase thirty (30) trucks and fit with HIMARS rockets with a 70km or 300 km range.

Save many hundreds of millions of dollars by NOT purchasing another 250 very expensive ASLAV's:

Retire all ASLAV's when they wear out around 2020 and replace them with two hundred and fifty (250) new Bushmasters fitted with one hundred (100) remote control weapons stations (R.C.W.S.) firing a 25mm cannon and one hundred and fifty (150) R.C.W.S. firing machine gun and/or automatic grenade launcher. Save many hundreds of millions of dollars by NOT purchasing another 250 very expensive ASLAV's or similar type under LAND 400.

LAND 400 - Easily implementing LAND 400 at minimum cost:

How to get 900 steel tracked, steel hulled vehicles under LAND 400 into operational service:

B. Ae. Systems CV-90 is the only battle proven, digitized, networked, steel hulled, steel tracked vehicle built in the Western world today. It is capable of successfully fighting in an intense 1950's Korean War over twelve months or fighting concurrent (2) wars over twelve months. PUMA and SCOUT SV are NOT combat proven. PUMA is just coming into service while
SCOUT SV will be operational by 2020 at brigade level.

No other 21st century, digitized, networked, practical alternative, steel hulled, steel tracked vehicle to CV-90. B. Ae. Systems Terrier M.S.V. is a proven, digitized, networked 21st century M.S.V. Both achieve LAND 400 requirements.

(1) (a) Lease two hundred (200) B. Ae. Systems CV-90's of different sub-types from current users to get CV-90's into service asap. No other steel hulled tracked vehicle is available for lease in large numbers. No other option for Army. U.S. Army Bradley has an aluminium hull with ceramic armour and is worn out. PUMA and SCOUT SV are NOT combat proven. PUMA is just coming into service while SCOUT SV will be operational by 2020 at brigade level.

Since the end of Vietnam War in 1975; it has been vital to replace aluminium hulled M113's to provide Army with a new capability to move soldiers in steel hulled, steel tracked vehicles in a high level, intense 1950's Korean type war. Today, CV-90 Armadillo and CV-90 A.I.F.V. can achieve this objective and achieve LAND 400.

Similar types are NOT battle proven and are only just coming into service such as PUMA or coming into service over next five years such as SCOUT SV. Both are extremely expensive because of limited production numbers.

(1)(b) Purchase two hundred and fifty (250) B. Ae. Systems CV-90's from European production line from 2017 (when Norway's production stops) to get new B Ae Systems CV-90's into service asap.

Fifty (50) CV-90's are tanks firing a 105mm or 120mm round. Subject to Army-D.S.T.O. trials.

(100) are CV-90 Armadillos fitted with an R.C.W.S. firing a 25mm cannon or a 0.50 inch machine gun. Subject to Army-D.S.T.O. trials.

(100) CV-90 A.I.F.V's are fitted with a 25mm cannon plus a machine gun/automatic grenade launcher in a turret. Subject to Army-D.S.T.O. trials.

CV-90 tank firing a 105mm or 120mm round:

CV-90 tank at 35 tonnes (minimum) firing a 105mm or 120mm gun is much easier to deploy and move around the battlefield. It is fitted with a diesel engine instead of a jet engine in the 65 tonne Abrams. Subject to Army-D.S.T.O. trials.

(1) (c) Replace ABRAMS tanks when they wear out with CV-90 tanks or similar type:

Replace all ABRAMS tanks when they wear out with CV-90 tank firing a 105mm gun or 120mm gun or some other type. Subject to Army-D.S.T.O. trials. Abrams tanks are too heavy at 65 tonnes to deploy to many countries overseas with poor quality roads or during a monsoon when there is extensive flooding of roads. Abrams huge fuel usage (has a single jet engine) could easily overwhelm limited Army logistics capabilities in a high level war where ammunition is being expended at a huge rate 24/7 and heavy, multiple demands overwhelm Army's limited logistics. No Army Ready Reserve with the skills ready to assist.
Abrams heavy demand on logistics could choke Army operations because Army under PLAN BEERSHEBA can deploy only one (1) multi-role combat brigade at any time for war.

(1) (d) Build 650 CV-90's or similar type in Australia. Set up a production line asap using the B Ae Systems current production line in Europe as a model. Manufacture as many parts in Australia as a good business case would allow. Subject to Army-D.S.T.O. assessment.

(1) (e) Provide two hundred (200) CV-90's or similar type to Army Reserve units for training and for war.

LAND 400 does NOT make specific mention of providing tracked, steel hulled vehicles such as CV-90's or similar type to Army Reserve units for both training and for war. Provide two hundred (200) CV-90's or similar type to Army Reserve units for training and war.

(1)(f) Replace all 400 M113AS4's when they wear out around 2030 with new CV-90's or similar type from an Australian production line.

(1)(g) Do NOT retire M113AS4's until worn out around 2030:

Important to keep M113AS4's in operational use until they wear out around 2030 because Army is severely deficient in tracked vehicles. IF Army follows current LAND 400 tortoise-like timelines; there will be too few CV-90's or similar vehicle in operational service in 2025.

LAND 400 wrongly ignore the many ugly lessons of past war:

Army planners under LAND 400 wrongly ignore the many ugly lessons of past wars and ignore the battlefield reality that many more steel tracked, steel hulled vehicle in many subtypes such as CV-90 or similar type will be required than the paltry numbers given in public documents and speeches.

LAND 400 vehicle types and numbers:

LAND 400 vehicle types and numbers are derived from an interview published in “Defence Today” magazine (Volume 11, Number 1, September 2014) between interviewer Peter Layton and Deputy Chief of Army and Head of Modernization of the Australian Army; Major-General Senglemann D.S.C., A.M., C.S.C.

LAND 400 current plans for vehicle types and numbers:

(A) 160 C R.V.; (B) 350 I.F.V.; (C) 20 M.S.V.
Many critical strategic failure points in LAND 400:

(1) LAND 400 fails under Army's current plan because it does NOT provide enough steel hulled, steel tracked vehicles such as I.F.V.'s plus C.R.V.'s plus M.S.V.'s to successfully fight concurrent (2) wars. Army planning cannot cope with fighting concurrent (2) wars where upwards of two (2) multi-role brigades are at war in two (2) different locations.
LAND 400 inventory under current Army plans is to be: (A) 160 C R.V. plus (B) 350 I.F.V. plus (C) 20 M.S.V.'s. Too few. LAND 400 ignores past battle lessons.

LAND 400's many critical failures causes both PLAN BEERSHEBA and ARMY OBJECTIVE FORCE 2030 to fail.

LAND 400 inventory should be (A) three hundred and twenty-five (325) C R.V.'s plus (B) three hundred and twenty-five 325 I.F.V.'s and two hundred (200) other subtypes such as command, fitter, recovery plus (C) fifty 50 M.S.V.'s such as B. Ae. Systems Terrier.
Add (D) -2,000 more new Bushmasters;
Add (E) wide variety of upgraded weapons and direct fire missiles for M113AS4, Bushmaster, Hawkei and G Wagon.

Army chokes on the two (2) battlefields:
Too few C.R.V. and I.F.V. subtypes and M.S.V.'s on the two (2) battlefields will cause Army to choke on the two (2) battlefields and stop fighting effectively; giving the advantage to the enemy and causing Army to give ground to the enemy because basic war fighting requirements cannot be met. LAND 400 ignores past battle lessons.

Army wrongly puts soldiers lives at risk by having too few I.F.V.'s plus C.R.V.'s plus M.S.V.'s in service to successfully fight concurrent (2) wars in Army's current plan for LAND 400.

(2) Too few I.F.V.'s, too few C.R.V.'s and too few M.S.V.'s under current LAND 400 plans to successfully fight in one (1) intense Korean type war over a continuous twelve (12) months:

LAND 400 fails under Army's current plan because it does NOT provide enough steel hulled, steel tracked C.R.V.'s, I.F.V.'s and M.S.V.'s on the battlefield to successfully fight one (1) intensely fought 1950's Korean type war over twelve (12) months plus for training requirements in Australia.
LAND 400 cannot cope with fighting one (1) intensely fought Korean type war similar to the 1950's Korean War over one (1) continuous twelve (12) months. LAND 400 ignores past battle lessons.

(3) LAND 400 fails under current Army plans because it has NO LARGE WAR INVENTORY of I.F.V.'s, C.R.V.'s M.S.V.'s to take into account fighting in an intense Korean type war over
twelve (12) months or fighting two (2) concurrent wars over twelve months with factors such as battle damage, regular heavy maintenance, accidents writing off vehicles and having plenty of the vehicles to successfully fight intense battles with little respite takes a severe toll on battle ready I.F.V.'s and C.R.V.'s and M.S.V.'s. LAND 400 ignores past battle lessons.

NO spare I.F.V.'s and C.R.V.'s and M.S.V.'s from Army inventory could easily cause Army to choke on the battlefield and stop fighting effectively; giving the advantage to the enemy and causing Army to give ground to the enemy.

(4) LAND 400 fails under current Army plans because it has too few I.F.V.'s and C.R.V.'s for supplying logistics IF difficult terrain or enemy mortar fire stops wheeled vehicles supplying logistics to soldiers on the battlefield:

Army planners under LAND 400 wrongly ignore the lessons of many past battles where roads become impassable to wheeled vehicles because of weather, terrain, enemy artillery and mortar fire.

Army could easily choke on the battlefield because of a shortage of supplies and stop fighting effectively; giving the advantage to the enemy and causing Army to give ground to the enemy.

Army planners wrongly ignore the battlefield reality that many logistics vehicles are required to supply large quantities of both fuel and ammunition to Abrams tanks together with their own M.S.V.'s to fix roads and remove obstacles to get 65 tonne Abrams to the battlefield on time; resulting in too few M.S.V.'s available to dig trenches and make fortifications for Army soldiers on the frontline.

(5) LAND 400 fails under current Army plans because Army planners wrongly ignore the battlefield reality that many extra I.F.V.'s will be required to provide both mobile 120mm mortars and direct fire rockets such as SPIKE ER in a high level war similar to 1950's Korean War or fighting two (2) concurrent wars.

Too few C.R.V.'s or I.F.V.'s firing 120mm mortars from inside the I.F.V. or firing SPIKE ER long range rockets could easily cause Army to choke and stop fighting effectively; giving the advantage to the enemy.

(6) LAND 400 fails under current Army plans because Army planners wrongly ignore the battlefield reality that large numbers of steel tracked, steel hulled vehicles will have to perform roles such as fitter, recovery, surveillance, ambulance, ELINT/SIGINT and command. Too few these sub types could easily cause Army to choke and stop fighting effectively; giving the advantage to the enemy and causing Army to give ground to the enemy.

(7) LAND 400 fails under current Army plans because Army planners wrongly ignore the much larger numbers of I.F.V.'s, C.R.V.'s and M.S.V.'s required for fully outfitting the three (3) multi-role combat brigades under PLAN BEERSHEBA.

Twenty (20) M.S.V.'s is too few to be divided by three. Army planners wrongly ignore PLAN BEERSHEBA requirement to have three fully equipped multi-role combat brigades. Require a minimum of fifty (50) M.S.V.'s.
(8) LAND 400 fails under current Army plans because Army planners wrongly ignore the large numbers of I.F.V.'s, C.R.V.'s and M.S.V.'s required for outfitting Army Reserve units for training and war.

Army planners under LAND 400 cause PLAN BEERSHEBA TO FAIL BADLY because Army Reserve has a big role to play under PLAN BEERSHEBA but is stymied by LAND 400 and inept planning which ignores Army Reserve.

Army Reserve requires a minimum of 100 I.F.V.'s, 100 C.R.V.'s and 20 M.S.V.'s for Army Reserve units to train and go to war. Army planners wrongly ignore Army Reserve.

(9) LAND 400 fails under current Army plans because many I.F.V.'s and C.R.V.'s and M.S.V.'s are required for training large numbers of both full time Army units plus Army Reserve units for war (intense Korean type war) and concurrent (2) wars while Army fights a war or wars.

(10) LAND 400 fails under current Army plans because Army planners wrongly ignore the battlefield reality that a large number of M.S.V.'s will be required to carry out many tasks in a few days to prepare roads, remove obstacles, remove enemy minefields and build trenches and fortifications or lose the battle before it starts because the enemy moves into Army's frontline and secures it.

Too few (20) M.S.V.'s could easily cause Army to choke; giving the advantage to the enemy and causing Army to fail to get to the battlefield on time and lose the battle before it starts because the enemy moves into Army's frontline and secures it.

(11) LAND 400 fails under current Army plans because Army planners wrongly ignore the battlefield reality that a tank around 35 tonnes such as the B. Ae Systems CV-90 TANK firing a 105mm or 120mm gun could replace or supplement Abrams tanks and has a much lower demand on logistics.

Army planners under LAND 400 do NOT consider options to retire or to supplement ABRAMS tanks.

(12) Army's current LAND 400 plan fails Army's amphibious capabilities and undermines PLAN BEERSHEBA because LAND 400 does NOT provide enough I.F.V.'s plus C.R.V.'s plus M.S.V.'s to allow Army to have enough of these three (3) types in Army inventory to allocate to both 2RAR on a permanent basis for amphibious operations and to allocate to Army Reserve units for training for amphibious operations and going to war.

Army planners under LAND 400 wrongly ignore the battlefield reality that amphibious operations will require many M.S.V.'s and I.F.V.'s and C.R.V.'s performing both logistics work and transporting soldiers around the battlefield. Current numbers for M.S.V.'s and I.F.V.'s and C.R.V.'s are too few for concurrent war operations which include one (1) amphibious war operation at the same time a one land war operation is carried out.

**LAND 400 has twelve (12) critical failure points which critically undermine both**
PLAN BEERSHEBA and ARMY OBJECTIVE FORCE 2030 causing them to both fail.

Author's details:

author's name: roger jennings

Author has been critically analyzing numerous defence projects covering many countries such as the U.S.A., Britain, Western Europe, Canada, New Zealand and Australia over more than the past forty (40) years.

Author has provided a realistic, practical, easily affordable plan which builds a strong, 21st century Army capable of successfully fighting in a high level war similar to the Korean War of the 1950's; a strong, 21st century, highly capable Navy and R.A.A.F.

Author applied the many lessons from too many failed Western defence projects and his encyclopedic knowledge of many aspects of defence.

Material in this submission is entirely his own opinion.

END OF SUBMISSION