



Directorate of Force Development

AGILE WARRIOR 11 Summary of Insights



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Introduction

The AGILE WARRIOR programme has been established to deliver an evidence-based analysis of future land-force requirements, with associated recommendations, to inform and drive land force transformation.

The intent is to identify, using experimentation, research, military judgement and other techniques, set within the context of the agreed Defence view of the future¹, a force structure and its associated capability requirements for the FCOC era out to 2020.

A number of headline questions were set in order to address the key themes requiring study in the first year of the AGILE WARRIOR programme, noting that the SDSR was being conducted in parallel and was published after AGILE WARRIOR had commenced. The main question set was articulated as seven Work Packages which in turn were allocated to an appropriate lead organisation to execute.

¹ Provided by Global Strategic Trends, Future Character of Conflict and 'How We Will Fight on Land'

Work Packages

Work Package 1	Test the ability of the TAS structure to transition to best-effort Divisional level operations in a hybrid conflict.
Work Package 2	Test how a Multi Role Brigade will fight and operate in a hybrid conflict. Test how our sustainment and service support organisations will operate in hybrid conflict.
Work Package 3	Evaluate and determine the Army's future C2 requirements, and associated models, for ISTAR and CIS, in an MRB HQ.
Work Package 4	Determine the 'Understand' demands of continuous modulated engagement and deployed operations and recommend the optimum structures to meet them.
Work Package 5	Determine the nature of future demand on commanders and soldiers.
Work Package 6	In what ways will we need increased Army agility in the future and how should we look to promote it?
Work Package 7	Test and evaluate the major constituent parts of our current doctrine and determine its necessary conceptual direction of travel in the next 10 years.

These Work Package leads were each supported by a scientific team from Dstl which used a range of techniques to inform their work. The wide range of methods and activities employed throughout the programme are shown on page 6.



Methods

3(UK)Division Exercise IRON STORM
 Command and Staff Training exercises (CASTs) (1,12 and 19 Brigades)
 Military Judgement Panels (MJPs)
 Academic Studies
 Map Exercises (MAPEXs)
 RUSI Land Warfare Study Group Seminars
 Chatham House Conference
 Dstl Wargaming at Fort Halstead
 Existing High Level Operational Analysis (HLOA)
 Data mining of the Dstl Knowledge Base
 On-line SharePoint Discussion Fora
 Red Teaming
 Multi-National Engagement:
 Ex UNIFIED QUEST
 Bi-lateral Army Staff Talks (AUS, CAN,US,NZ)
 Briefing and liaison with Multinational Liaison Officers
 Industrial engagement via NITWORKS, RUSI and Chatham House
 Seminar Based Wargame (URBAN WARRIOR 1)
 Tactical Exercises (URBAN WARRIOR 2&3)
 MOD Scrutiny community engaged throughout

In addition to the formal Work Packages addressed in AW 11, a number of supporting investigations were conducted. The insights that follow, however, are largely based upon the formal WPs.



Insight #1: People

In the conflicts to come, 'people will be our edge'. It is 'intelligent warriors', agile and thinking people, who will improvise and who will seize and hold the initiative.²

The Future Character of Conflict (FCOC) paper established people as being our 'strategic edge'. We must establish a culture across Defence and the Army, which instinctively makes people the priority capability. This may require a change in the way that the MoD does business. Such a people-centric culture must ensure that selection and professional development of leaders, at all levels, is based on cognitive and intellectual skills. This may challenge the current 'warrior first' ethos. This approach will enhance, not undermine, operational effectiveness in the FCOC era. We must champion a culture that values and rewards cognitive, conceptual and intellectual skills and we must develop though-life career and reward structures, which support this.

The Army must continue to recognise the benefits of importing best practice and innovation through external attachments to civilian organisations and should consider more flexible career structures and rewards, which recognise the contribution of subject matter experts (SMEs). Such a structure should encourage and enable the best individuals in key trade groups to remain in-role.³ This would provide both continuity of expertise and the continuous development of specific trades. Such a comprehensive people strategy would underpin the vital 'understand' function detailed below.

² Work Package 5 Report, Hd Land DCDC.

³ For example, reduced career churn would allow for specialists to remain in posts for longer without career penalty.



Insight #2: Understanding

*No matter how clearly one thinks, it is impossible to anticipate precisely the character of future conflict. The key is not to be so far off the mark that it becomes impossible to adjust once that character is revealed.*⁴

The current and future operating environments demand the intelligent and agile application of military and cross-government instruments. Understanding will be fundamental to effective decision making at all levels. It goes beyond the mere provision of intelligence; Joint Doctrine Publication (JDP) 04 establishes Defence's approach to understanding, defining it as *...the perception and interpretation of a particular situation in order to provide the context, insight and foresight required for effective decision-making.*⁵ Understanding is an essentially human activity, which is dependent on education and training of our people from commanders to soldiers. Given that understanding is the principal input, and influence our principal output, we must establish a doctrinal base linking Understanding to Influence. This will require further resources to enable it at battlegroup and formation headquarters. Land forces will operate in a Combined, Joint, Intergovernmental, Interagency and Multinational (CJIIM) environment and must establish standing relationships with Other Government Departments (OGDs) and cross-government bodies, with which it must routinely train. Consideration should be given to a land forces proponent to develop and maintain CJIIM relationships. Defence should be encouraged to formalise the selection and training of Cultural and Political Advisors (CULAD and POLADs) and it might wish to consider a permanent cadre for such a vital resource to underpin the capacity to 'understand'.

⁴ Professor Sir Michael Howard quoted in JDP 04 Understanding, December 2010.

⁵ JDP 04, Understanding, p. 2-1 para 202 and also Concise Oxford English Dictionary (COED), 11th Edition: the ability to understand something; comprehension; the power of abstract thought (intellect); an individual's perception or judgement of a situation; sympathetic awareness or tolerance; an informal or unspoken agreement or arrangement; having insight or good judgement.



Insight #3: Information Superiority

Possessing a greater degree of information about the battlespace, being able to exploit that information more rapidly and preventing the adversary from obtaining or exploiting information which would give combat advantage.⁶

⁶ Joint Doctrine
Publication 0-01.1

Land forces must be able to fuse and share situational awareness and contribute to the Common Operating Picture (COP) at every level of command if they are to understand the complexity of future conflicts and achieve an advantage over an adversary. Current structures do not enable such situational awareness. Therefore the establishment of an Information Exchange Group (IX Gp) at brigade level should be resourced as a priority (which also enables increased 'understanding'), along with greater investment to develop scalable, flexible and mobile Command and Information Systems (CIS). The information requirements of units and formations operating across the Mosaic of Conflict, will be wide ranging. For a complex people-centric deployment in the future, information requirements will be more challenging, requiring different CIS structures and greater capacity. Regarding bandwidth, we need to consider turning the discussion on its head. Defence should define the amount of available bandwidth available for the deployed force and then, by understanding this constraint, develop the tools and applications that meet this constraint - or understand the risk being held by defence for the lack of bandwidth. The Command and Control (C2) of Multi Role Brigades must be designed around flexible information architecture, within the context of a divisional (or two-star) level of command. Only when the nature of the two-star level of command (that Defence is willing to maintain) is known, can the detailed requirements for command and information architecture be determined and developed. Information is not only fundamental to the 'fighting' echelons, it is 'the glue that binds the support network together'. Future force development must therefore not limit itself to information superiority in the combat and combat support elements of the force. Finally, Knowledge Management (KM) is a vital tool. It is all about getting the right information, in the right form to decision makers in the correct time frame without causing 'information overload'. The Army needs a robust and rigorously enforced end-to-end KM Plan, which is operated intuitively both in-barracks and on operations.



Insight #4: Command and Control ⁷

The key considerations for C2 are the need for interoperability across the demands of CJJIM operations. There is a requirement to receive, manage, interpret and utilise vast amounts of data from numerous sources. As such, HQs must form a common C2 core to which enablers can be attached and detached; employ sound KM; have scalable, flexible and wideband bearer communications systems; and be technologically interoperable with likely coalition partners. MRB HQs must be capable of operating within a two-star HQ C2 structure and hierarchy, as the 2* HQ enables the MRB to operate efficiently and effectively at the tactical level. The C2 of an MRB HQ must be flexible enough to meet the unpredictability of future conflict. An MRB C2 tailored solely for stability operations will not have sufficient flexibility to deal with the other possible demands of the mosaic of conflict, in particular for mobile communications. Recent UK experience in command of Regional Command (South) has highlighted the essential nature of C4I 'manoeuvre' and its necessary resourcing.

Insight #5: Risk

*Military success comes through the identification of when to take decisive risks, not from a mindset that avoids them. By its very nature, military activity is about understanding, balancing and taking risks, rather than avoiding hazards.*⁸

The Army must maintain a culture that recognises that risk-taking is a fundamental requirement of the military profession and that our success on operations depends on it. We must encourage risk-taking and innovation during training and support those who take considered risk. We also need to differentiate between force protection measures during non-operational activity and the management and exploitation of risk on operations. The start point must be to educate the force on current risk management procedures, whilst concurrently cultivating and rewarding a dynamic attitude to risk.

Insight #6: Multi Role Brigade Utility

The MRB was found, on the whole, to be fit for the purpose of providing a platform for force generation, accepting that it will require task organisation in order to generate a mission specific unit of action. For a 'standard' MRB the size of the Area of Responsibility (AOR) that can be assigned is highly sensitive to the nature of the operation (threat, terrain etc) and this will need to be reflected as planning guidance in doctrine. For example, experimentation showed that if a satisfactory force ratio is to be achieved for COIN operations,⁹ then the AOR for a MRB of 6500 personnel would equate to a small urban area such as Newton Abbott. To exceed such planning guidelines would engender increased risk. Work Package 2 reinforced the observation that mass is directly related to a formation's ability to achieve success. It should be noted however that additional mass could be achieved on a case by case basis though effective coalition partnering and military capacity building (MCB).

⁷ Command.

Command is defined as the authority vested in an individual for the direction, coordination and control of military forces.

Control.

Control is defined as the coordination of activity¹¹, through processes¹¹ and structures that enable a commander to manage risk and to deliver intent.

⁸ Army Doctrine Publication - Operations

⁹ Also supported by lessons from Op HERRICK.



Insight #7: MRB Shortfalls

The current provision of manoeuvre support to an MRB is a risk that must be understood as it is likely that current structures will prevent the MRB from achieving decisive manoeuvre in a cluttered and contested environment. The ability of the MRB to provide guaranteed, simultaneous suppressive and precision fires, particularly in a coalition setting must be better understood, as there is a growing risk that an MRB will not be able to provide organic precision fires across its own Area of Responsibility.

The ability of commanders to personally command deployed forces must not be lost in the FCOC era and the Battlefield Helicopter, Support Helicopter and FRES programmes must retain a capability to enable commanders' tactical headquarters manoeuvre.

The requirement for a robust liaison structure and support to Military Capacity Building (MCB) will place considerable demand on MRB manpower. It is unclear where such manpower will come from; a far leaner firm base may not in future be able to provide augmentees in the way it has in the past.

The MRB should be optimised to fight at the tactical level, fully capable of manoeuvre in all environments; ground, lower air and cyber. The structure required to achieve manoeuvre and the training it requires will provide the baseline from which to adapt to other tasks.

Fundamentally, the MRB must be structured, trained and equipped to enable combined arms manoeuvre. Taking risk in these areas threatens defeat. This was one of the key findings from Work Package 2.

Insight #8: Understanding Hybrid Threats

In future conflict smart adversaries will present us with hybrid threats (combining conventional, irregular and high-end asymmetric threats) in the same time and space.¹⁰

Defence and the Army have no institutional mechanism for understanding our potential, future adversaries. There is no start point for systematic force development and contingent preparedness. We need to invest in a contemporary equivalent of the Soviet Studies Research Centre (SSRC) to fully examine the nature of potential future adversaries. The use of the Contemporary Operating Environment Scenario (COESCEN) initiative is a step in the right direction, but we need a focussed and institutionalised method of study. Force Development, force generating and deployable commands and formations need a thorough understanding of potential adversaries before the crisis hits. Reconfiguration of the Land Intelligence Fusion Centre (Afghanistan) (LIFC(A)) may go some way to provide this capability and could provide the necessary foundation as combat operations are reduced in Afghanistan in future years.

Insight #9: Red Teaming ¹¹

Our current red teaming activity tends to be bespoke and/or ad hoc. For example, the team and processes in support of AGILE WARRIOR were built largely from scratch. The Army lacks institutionalised Red Teaming. Nor is the process taught and explained through our military education. We need to resource Red Teaming to a significantly greater extent than we have done in the past if we are to support Force Development, force generation and on deployed operations.

The adaptability of potential adversaries means that we must continually challenge our base assumptions. We must study our potential adversaries and not ignore the weak signals that may signpost the need for change.

¹⁰ DCDC: Future Character of Conflict.

¹¹ Red Teaming is the art of applying independent structured critical thinking and culturally sensitised alternative thinking from a variety of perspectives, to challenge assumptions and fully explore alternative outcomes, in order to reduce risks and increase opportunities.
DCDC Guidance Note: A Guide to Red Teaming.



Insight #10: Wargaming

Wargaming¹² is a powerful tool which is currently not well understood and therefore somewhat neglected. Prussian Kriegsspiel, the original form of wargaming, was simple in concept and consisted of four phases:

- A Tactical Exercise Without Troops (TEWT), a Staff Ride or other study of the problem;
- Production of a preferred solution and plan;
- Wargame it repeatedly as time allows with a free playing adversary;
- Use the results either for Force Development, or for the production of a refined plan for a real contingency, or both.

The conduct of the wargame itself included four essential elements: it must be genuinely adversarial, with individuals or teams free-playing against each other; it must be umpired; it must involve a deliberate element of uncontrollable chance; and scenarios should be fought through as often as time permits (lessons from the games grow in validity in proportion to the number of games played and the consistency of outcomes). We currently treat wargaming as an unstructured review of our plan or available courses of action - it is, more often than not, a self-analysis or talk-through to identify weaknesses or confirm our comfort with our own decisions and reasoning. We need rapidly and radically to re-address our understanding and use of this very powerful tool and to resource it appropriately.

Insight #11: Homogeneity and Standardisation ¹³

The agility of a force is largely dependent on its ability to task organise for specific operations. The current lack of homogeneity between brigades, along with a lack of common Standard Operating Procedures (SOP)s, reduces the ability to task-organise and force generate, thereby constraining agility. It also reduces operational effectiveness between roulements. The adoption of modular and standardised MRBs will help to mitigate against this. Modularity and standardisation will assist the generation of the force during Mission Specific Training (MST) immediately prior to deployment. It will also improve the ability of the MRB to operate in a multi-national setting, where task organisation will routinely include partner nations within ad-hoc alliances.

Insight #12: Training and Doctrine

Headquarters 3 (UK) Division considered their staff processes 'fit for the FCOC environment'. Notwithstanding the likely need to incorporate new disciplines such as the influence/effects cycle, it is suggested that much of the current body of tactical doctrine is sound. However, too much of our tactical doctrine is 'special to arm' where instead it should be, by default, combined arms in nature. Furthermore, our ability to deliver adequate and sufficient training against current doctrine is questionable. Greater effort is needed to identify which capabilities and processes should be retained post Op HERRICK. Work Package 7 identifies that extant tactical Doctrine (TD) for the conduct of Offensive, Defensive and Enabling Action is generally sound, but is now dated, and does not fully reflect the characteristics and demands of the FCOC era. Doctrine for these Tactical Actions should become, and remain, the priority for update.

¹² Wargaming:
An event to simulate a military operation; testing underpinning assumptions and testing and comparing the impact of proposed courses of action.

¹³ Land forces' structures derive much of their agility from homogeneity. Army Doctrine Publication - Operations.



Insight #13: Reserves

The distribution of reserves in the current version of Transformational Army Structures (TAS) needs further examination. In places the distribution appears to be determined by planning assumptions for contingent readiness that have been superseded by the SDSR. For example, there is a uniform distribution of reserves between the MRBs even though they will have very variable readiness states. The Army will need improved access to specialist skills and knowledge and consideration should be given to enhanced and flexible reserve retention arrangements to maintain such access. The retention, for example, of regional experts on long-term reserve commissions would enable rapid access to such knowledge when the time arises and would significantly enhance the 'understand' function. Such issues will be considered and taken forward during the Whole Force Concept (WFC) Study and Future Reserves 2020 Study (FR20).

Insight #14: Urban Operations

Urban Operations have been examined in a separate work-strand: Exercise URBAN WARRIOR. This examination continues, but some emerging findings are available. The Army is not ready, in both preparedness and capability terms, for the demands of future urban operations. Emerging findings already suggest that the role of armour will need to change in high density urban operations in order to support the infantry. We will also have to develop air manoeuvre doctrine specifically for high density urban areas - where the lower airspace may become increasingly contested. In urban operations amongst the people, land forces may have to increasingly decentralise forces, by design. Such an operating environment will place significantly greater demands upon commanders and soldiers to understand the nature of emerging conflicts. Greater investment in urban training will be required and the Army should consider how and where to deliver such urban training, with the required scale and friction. Simulation will play a part, but consideration should be given to partnering of urban facilities, possibly with France. Provision of Combat Service Support in this non-linear battlespace will require further study in AGILE WARRIOR 12.

The URBAN WARRIOR work strand clearly identified that the Equipment Programme needs to focus more on the demands of the '5Cs' and the urban environment. In an urban environment the conduct of all tactical functions are likely to be both more complex and more challenging .

Insight #15: Lower Air C2

FCOC asserts that: *"In the air, the ability to operate, especially in the lower airspace and around air bases, will be contested"* and also *"To achieve the required effect in a complex environment, further operational and tactical decentralisation, such as air/land/maritime integration at far lower levels, will be required."* Little or nothing in recent UK experience or current doctrine adequately prepares us to control the air in high density urban complexes and such control will rely critically on land forces. The Army has become used to manoeuvring in largely uncontested lower airspace. We need a new doctrine to enable effective control of the lower airspace. It is likely that we will need to conduct such operations at night, across the lunar-cycle. Current doctrine and capabilities prevent us from operating in black-light conditions, which are now an inherent part of coalition operations.¹⁴ We will need to invest in such capabilities in order to ensure both MRB air manoeuvre proficiency and MN interoperability.

¹⁴ Conversely, well lit urban environments may degrade our current comparative advantage of flying in low light conditions at night.

**Insight #16: Sustainment**

Contemporary sustainment is delivered through a hub and spoke mechanism, however we are structured for an echelon approach for the delivery of Combat Service Support. Further experimentation is required to determine whether a mix of both sustainment mechanisms remain essential capabilities or whether one preferred model should be adopted.

To operate effectively in a distributed and contested environment will require enhanced information and understanding, C2 structures and importantly, organic force protection for CSS elements. The latter will enable CSS to conduct effective task organisation in support of the MRB; a key contributor to agility. We should however retain the ability to generate CSS mass for best effort deployments and this may be a useful task for the Reserves. It is clear that sustainment is an area requiring considerable force development effort. How we organise our enablers is inseparable from a number of other major studies, both Defence and single Service. These include the Whole Force Concept (WFC), the Force Generation Study and the Future Reserves 2020 Study. AW 12 will consider sustainment in greater detail and will require tri-service involvement.

Insight #17: Interoperability

Interoperability will be an essential enabler to coalition effectiveness. AGILE WARRIOR 11 deliberately did not examine interoperability as a specific area of study, but it repeatedly featured as a key factor, emerging across many work packages. AGILE WARRIOR 12 will continually explore the opportunities that exist for wider multinational engagement in Force Development activities. In particular, it is likely that in addition to engaging with the US Exercise UNIFIED QUEST, there are significant opportunities afforded by experimentation and research conducted by other ABCA and NATO nations.



ANNEX A - Candidate Force Design Principles Emerging from AGILE WARRIOR 11

Developing People

Investing in and developing the people required for the future force

Establish a culture across Defence and the Army, which makes people the priority capability.

A culture that values and rewards progression through professional cognitive, conceptual and intellectual development and assessment.

Career structures to allow the generation and cultivation of specialists and/or institutionalise access to other specialist sources.

Career and reward structures to promote the long-term retention of excellence within key trades.

A risk-tolerant culture cultivated and supported by doctrine and trained down to the lowest levels.

Standardised plug and play arrangements for military and civil augmentees.

Soldiers trained to live among the population.

'Every soldier a sensor' required. This includes CSS elements.

Institutionalise routine and robust affiliations and training between OGD/agencies and formation and BGs.

Formation commanders enabled to exercise personal command over deployed force elements.

Professionalizing ISR

Creating and resourcing the exploitation of knowledge and information

A professionalised ISR function at BG and Formation levels.

J2 staff trained and established at the coy/sqn level.

ISR collection/fusion and dissemination at the coy/sqn level.

The IM/IX function established in an MRB HQ.

Rigorous collective, C-JIIM training required by design.

An Influence-Effects Cycle established in doctrine and fully resourced.

Standardised SOPs and protocols at formation and BG levels - less initiative and more 'followership' required. This includes IM/IX procedures and intelligence fusion.

Fighting and Operating

Generating the future force's agility to deliver Land Fighting Power

Agility, rapid re-grouping and multi-national interoperability through a homogenised force structure.

An MRB will routinely deploy under a UK or MN 2* HQ.

UK formations prepared and generated to operate in national, junior or lead roles.

MRBs structured and trained to routinely operate in C-JIIM, not just military environments.

Make Continuous Modulated Engagement (CME), core LAND component business, including doctrine, governance and training.

Military Assistance and Stabilisation Group (MASG) established and resourced to generate Military Assistance to Civil Effect (MACE) and Military Capacity Building (MCB) in proportion to 5 x MRB structure and specialist BGs.

MAG elements optimised for enduring MCB role.

An MRB optimised for manoeuvre in all environments.

The MRB will be highly capable in ground, air and cyber manoeuvre.

The MRB able to dominate the subterranean environment and lower airspace.

An MRB will require a guarantee of simultaneous indirect and precision fires.

Sustainment

Provide flexible support that enables & enhances the fighting force

Force resilience supported by rigorous and proven reversionary techniques and modes.

Host Nation protection provided through a combination of MN partnering, HN MCB and UK SMEs.

Logistic re-supply routinely operated on a hub and spoke basis, including de-centralised support to BGs in a non-permissive environment.

Self-protected logistic Force Elements operating in a non-permissive environment.

Proven CSS capacity to generate mass for larger scale of effort.

3D logistic framework [including the littoral], rather than 2D.

**ANNEX B - AGILE WARRIOR 12 - Work Package Areas**

- 1 Urban Operations.
- 2 Influence and Cyber Operations.
- 3 Theatre and Formation C2.
- 4 Reserves and Whole Force Concept.
- 5 UORs to Core Programme.
- 6 Homeland Operations.
- 7 Officers' and Soldiers' Professional Development.
- 8 Sustainment.